ORDER NO. MD0702003CE
A6

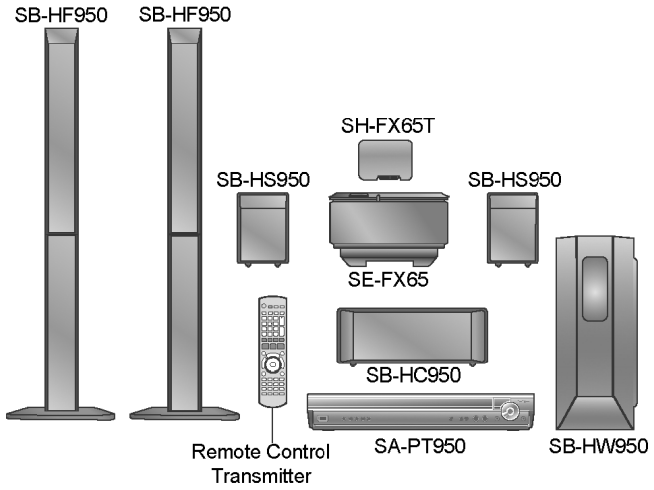
Service Manual

DVD Home Theater Sound System

SA-PT950P
SA-PT950PC

Colour

(K).....Black Type



Specifications

GENERAL

Power Supply:	AC 120 V, 60 Hz
Power Consumption:	135 W
Dimensions (W×H×D):	430×75×424 mm (16-15/16"×2-15/16"×16-11/16")
Mass:	Main unit 5 kg (11.02 lbs)
Operating Temperature Range:	+5°C to +35°C (+41°F to +95°F)
Operating Humidity Range:	5% to 90% RH (no condensation)

AMPLIFIER SECTION

RMS Output Power: Dolby Digital Mode

Total RMS Dolby Digital mode power: 1200 W

At 1 kHz and total harmonic of 10%

Front Ch:	250 W / Channel (6 Ω)
Center Ch:	250 W / Channel (6 Ω)
Surround Ch:	100 W / Channel (4 Ω)

At 100 Hz and total harmonic of 10%

Subwoofer Ch:	250 W / Channel (6 Ω)

FTC Output Power: Dolby Digital Mode

Total FTC Dolby Digital mode power: 472 W

At 120 Hz - 20 kHz and total harmonic of 1%

Front Ch:	104 W / Channel (6 Ω)
Center Ch:	101 W / Channel (6Ω)
Surround Ch:	34 W / Channel (4Ω)

At 45 Hz - 120 Hz and total harmonic of 1%

Subwoofer Ch:	95W / Channel (6Ω)

FM/AM TUNER, TERMINALS SECTION

Preset Memory:	FM 30 stations AM / MW 30 stations

Frequency Modulation (FM)

Frequency range:	87.9-107.9 MHz (200-kHz step) 87.5-108.0 MHz (100-kHz step)
Sensitivity:	2.5 µV (IHF)
S/N 26 dB:	2.2 µV
Antenna terminals:	75 Ω (unbalanced)

Amplitude Modulation (AM/MW):

Frequency range:	520-1710 kHz (10-kHz step)
AM Sensitivity S/N 20 dB at 1000 kHz:	560 µV/m

Phone Jack:

Panasonic®

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Terminal: Stereo, 3.5 mm (1/8") jack

Music Port (Front):

Sensitivity: 100 mV, 1.2 kΩ

Terminal (Input): Stereo, 3.5 mm (1/8") jack

IDISC SECTION

Discs played [8 cm (3") or 12 cm (5")]:

(1) DVD (DVD-Video)

(2) DVD-RAM [DVD-VR, MP3 (*2, 5), JPEG (*4, 5)]

(3) DVD-R [DVD-Video, DVD-VR, MP3 (*2, 5), JPEG (*4, 5)]

(4) DVD-R DL (DVD-Video, DVD-VR)

(5) DVD-RW [DVD-Video, DVD-VR, MP3 (*2, 5), JPEG (*4, 5)]

(6) +R, +RW (Video)

(7) +R DL (Video)

(8) CD, CD-R/RW [CD-DA, Video CD, SVCD (*1), MP3 (*2, 5), WMA (*3, 5), JPEG (*4, 5), HighMAT Level 2 (Audio and Image)]

*1 Conforming to IEC62107

*2 MPEG-1 Layer 3, MPEG-2 Layer 3

*3 Windows Media Audio Ver.9.0 L3

INot compatible with Multiple Bit Rate (MBR)

*4 Exif Ver 2.1 JPEG Baseline files

IPicture resolution: between 160 x 120 and 6144 x 4096 pixels (Sub sampling is 4:0:0, 4:2:0, 4:2:2 or 4:4:4). Extremely long and narrow pictures may not be displayed.

*5 The total combined maximum number of recognizable audio and picture contents and groups: 4000 audio and picture contents and 400 groups

Pick Up:

Wavelength:

ICD: 785 nm

IDVD: 662 nm

Laser power:

ICD / DVD: (P) CLASS I / CLASS II

ICD / DVD: (PC) CLASS 1M / CLASS 1

Audio Output (Disc):

Number of channels: 5.1 ch (FL, FR, C, SL, SR, SW)

IVIDEO SECTION

Video System: NTSC

Composite Video Output:

IOutput level: 1 Vp-p (75 Ω)

ITerminal: Pin jack (1 system)

Component Video Output (480p/480i):

IY output level: 1 Vp-p (75 Ω)

IP_B output level: 0.7 Vp-p (75 Ω)

IP_R output level: 0.7 Vp-p (75 Ω)

ITerminal: Pin jack (Y: green, P_B: blue, P_R: red) (1 system)

HDMI AV Output:

ITerminal: Type A connector (19-pin), CEC Ver.1.3a

Power Consumption in Standby Mode:

approx. 0.5 W

Note:

1. Specifications are subject to change without notice.
   Mass and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

Solder:

This model uses lead free solder (PbF).

Mechanism:

This model uses RC1U (Rotary tray) mechanism.

System	SC-PT950P	SC-PT950PC
Main unit	SA-PT950P	SA-PT950PC
Speaker system	SB-PT950P	SB-PT950PC
Digital system	SH-FX65P	SH-FX65PC

Speaker system	SB-PT950P
Front speakers	SB-HF950P *1
Center speaker	SB-HC950P *2
Surround speakers	SB-HS950P *3
Subwoofer	SB-HW950P *4

Digital system	SH-FX65P	SH-FX65PC
Digital transmitter	SH-FX65TPP *5	SH-FX65TPP *5
Digital receiver	SE-FX65P *6	SE-FX65PC *7

Refer to the respective original service manuals for *1, *2, *3, *4, *5, *6, *7.

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Apparatus Claims of U.S. Patent Nos. 4,631,603, 4,577,216, and 4,819,098, licensed for limited viewing uses only.

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WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.

HIGH M·A·T AUDIO·IMAGE

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■ **Built-in decoders**
You can play discs with these symbols.

DOLBY DIGITAL PRO LOGIC II dts Digital Surround

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

CONTENTS

Page

1 Safety Precautions 6
1.1. GENERAL GUIDELINES 6
1.2. Before Repair and Adjustment 6
1.3. Protection Circuitry 7
1.4. Safety Parts Information 7
2 Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices 9
3 Precaution of Laser Diode 10
4 About Lead Free Solder (PbF) 11
4.1. Service caution based on legal restrictions 11
5 Handling Precautions for Traverse Unit 12
5.1. Cautions to Be Taken in Handling the Optical Pickup Unit 12
5.2. Grounding for electrostatic breakdown prevention 12
6 Accessories 14
7 Operation Procedures 15
7.1. Remote Control Key Buttons Operations 15
7.2. Main Unit Key Buttons Operations 16

7.3. Wireless Surround ··· 17
7.4. Using the EZ Sync HDAVI Control ··· 18
7.5. Using the XM Satellite Radio ··· 19
7.6. Using the Music Port ··· 20
7.7. About iPod ··· 20
7.8. Disc Information ··· 22
8 New Features ··· 24
8.1. About HDMI ··· 24
8.2. Wireless Features ··· 26
9 Self-Diagnosis and Special Mode Setting ··· 33
9.1. Service Mode Summary Table ··· 33
9.2. Service Mode Table (Main Unit) ··· 33
9.3. Wireless Service Mode Summary Table ··· 43
9.4. Service Mode Table (Wireless) ··· 44
9.5. DVD Self Diagnostic Function-Error Code ··· 46
9.6. Sales Demonstration Lock Function ··· 50
9.7. Service Precautions ··· 51
10 Assembling and Disassembling ··· 52
10.1. Disassembly Flow Chart ··· 54
10.2. Main Components and P.C.B. Locations ··· 55
10.3. Disassembly of Top Cabinet ··· 56
10.4. Disassembly of Tray Lid Assembly ··· 56
10.5. Disassembly of Front Panel ··· 56
10.6. Disassembly of Panel P.C.B. & Key P.C.B. ··· 57
10.7. Dissassembly of Tray Base Assembly ··· 57
10.8. Disassembly of Mechanism Base Assembly ··· 58
10.9. Disassembly of Rear Panel ··· 58
10.10. Disassembly of XM Module P.C.B. ··· 59
10.11. Disassembly of Wireless Adapter P.C.B. ··· 59
10.12. Disassembly of Tray P.C.B. ··· 60
10.13. Disassembly of D-Amp P.C.B ··· 60
10.14. Disassembly of Digital Amp IC (IC5000) ··· 61
10.15. Disassembly of DVD Module P.C.B. ··· 61
10.16. Disassembly of Main P.C.B. ··· 62
10.17. Disassembly of Regulator IC (IC2903) ··· 63
10.18. Disassembly of SMPS & AC-Inlet P.C.B. ··· 63
10.19. Disassembly of D-Port P.C.B. ··· 64
10.20. Disassembly of Switch Regulator IC (IC5701) ··· 64
10.21. Disassembly of Regulator Diode (D5803) ··· 65
10.22. Disassembly of Regulator Diodes (D5801 & D5802) ··· 65
10.23. Disassembly of Regulator Diode (D5702) ··· 66
10.24. Disassembly of Tray Guide (L) & Tray Guide (R) ··· 66
10.25. Disassembly of Rotary Tray ··· 66
10.26. Disassembly of Open Lock Gear ··· 67
10.27. Disassembly of Close Lock Gear ··· 67
10.28. Disassembly of Tray Motor P.C.B. ··· 68
10.29. Disassembly of Sensor P.C.B. ··· 68
10.30. Disassembly of Traverse Unit ··· 68
10.31. Disassembly of Pulley Gear ··· 69
10.32. Disassembly of Loading Motor P.C.B. ··· 69
10.33. Disassembly of Drive Gear (A) & Drive Gear (B) ··· 70
10.34. Disassembly of Magnet Holder, Washer, Magnet & Clamper ··· 70
10.35. Disassembly of Support Piece, Change Lever, Slide Plate (L) & Slide Plate (R) ··· 71
10.36. Disassembly of Cam Gear ··· 72
10.37. Assembly of Tray Base Assembly ··· 72
11 Service Fixture and Tools ··· 73
12 Service Positions ··· 73
12.1. Checking & Repair XM Module P.C.B. ··· 73
12.2. Checking & Repair D-Port P.C.B. ··· 73
12.3. Checking & Repair Panel P.C.B. & Key P.C.B. ··· 73
12.4. Checking & Repair Main P.C.B. ··· 74
12.5. Checking & Repair SMPS P.C.B. ··· 75
12.6. Checking & Repair D-Amp P.C.B. ··· 75
12.7. Checking & Repair DVD Module P.C.B. ··· 75
13 Measurements and Adjustments ··· 77
13.1. Service Tools and Equipment ··· 77
13.2. Important points in adjustment ··· 77
13.3. Storing and handling of test discs ··· 77
13.4. Optical adjustment ··· 78
14 Abbreviations ··· 79
15 Voltage and Waveform Chart ··· 81
15.1. DVD Module P.C.B. ··· 81
15.2. Main P.C.B. ··· 83
15.3. D-Amp P.C.B. ··· 84
15.4. SMPS P.C.B. ··· 85
15.5. XM Module P.C.B. ··· 85
15.6. Panel P.C.B. ··· 85
15.7. D-Port, Tray Motor, Loading Motor, Sensor & Tray P.C.B. ··· 86
15.8. Waveform Chart ··· 87
16 Illustration of IC's, Transistors and Diodes ··· 89
17 Wiring Connection Diagram ··· 91
18 Block Diagram ··· 93
18.1. System Control ··· 93
18.2. DVD (Servo) ··· 94
18.3. DVD (Video/Audio) ··· 95
18.4. DVD Interface ··· 96
18.5. Audio ··· 97
18.6. Audio Digital Amp ··· 98
18.7. Power ··· 99
19 Schematic Diagram Notes ··· 101
20 Schematic Diagram ··· 103
20.1. DVD Module (DV5/HDMI) Circuit ··· 103
20.2. XM Module & Main Circuit ··· 108
20.3. D-Port & Panel Circuit ··· 113
20.4. D-Amp & SMPS Circuit ··· 115
20.5. Tray, Key, Wireless Adapter, AC-Inlet & Loading Motor Circuit ··· 119
20.6. Tray Motor, Sensor & Optical Pickup Unit ··· 121
21 Printed Circuit Board ··· 123
21.1. DVD Module P.C.B. ··· 123
21.2. XM Module, D-Port & AC-Inlet P.C.B. ··· 124
21.3. Main P.C.B. ··· 125
21.4. Panel, Key & Wireless Adapter P.C.B. ··· 126
21.5. D-Amp P.C.B. ··· 127

21.6. SMPS P.C.B. ---- 128
21.7. Tray, Loading Motor, Tray Motor & Sensor P.C.B. ---- 129
22 Basic Troubleshooting Guide ---- 131
22.1. Basic Troubleshooting Guide for Traverse Unit (DVD Module P.C.B) ---- 131
22.2. Basic Troubleshooting Guide for HDMI AV output ---- 132
23 Overall Block for PT950 ---- 134
23.1. SC-PT950 Main Circuit Block ---- 134
23.2. SC-PT950 SMPS Circuit Block ---- 135
24 Terminal Function of ICs ---- 136
24.1. IC2001 (C2CBYY000442): System Control IC ---- 136
25 Exploded Views ---- 137
25.1. Cabinet Parts Location ---- 139
25.2. Packaging ---- 141
26 Replacement Parts List ---- 142
26.1. Component Parts List ---- 143

1 Safety Precautions

1.1. GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, carry out the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1MΩ and 5.2MΩ.
   When the exposed metal does not have a return path to the chassis, the reading must be ∞

1.1.2. LEAKAGE CURRENT HOT CHECK

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5kΩ, 10 watts resistor, in parallel with a 0.15µF capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in **Figure 1**.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

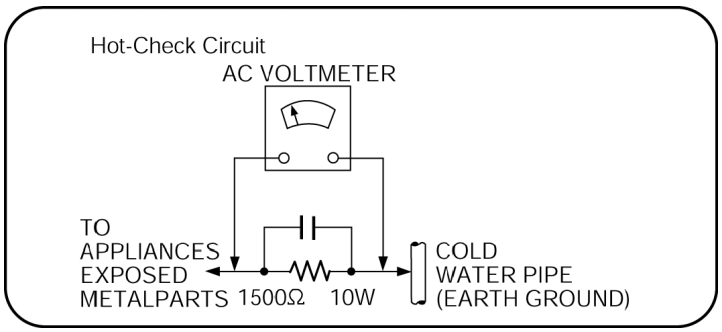


Figure 1

1.2. Before Repair and Adjustment

Disconnect AC power to discharge unit AC Capacitors as such C5700, C5701, C5703, C5704, C5705 through a 10 Ω, 10 W resistor to ground.

Caution:

DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.

After repairs are completed, restore power gradually using a variac, to avoid overcurrent.

Current consumption at AC 120 V, 60 Hz in NO SIGNAL mode volume minimal should be ~ 900 mA.

1.2.1. Caution for fuse replacement

(For English)
CAUTION:

Replace with the same type fuse:
(Manufacturer: LITTELFUSE, INC, Type: 233, F1, 8A, 125V)

(For Canadian French)
ATTENTION:

Utiliser un fusible de rechange de mme type:
(Manufacturer: LITTELFUSE, INC, Type: 233, F1, 8A, 125V)

1.3. Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlines below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

1.4. Safety Parts Information

Safety Parts List:

There are special components used in this equipment which are important for safety.
These parts are marked by ⚠ in the Schematic Diagrams & Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

Table 1

Reference No.	Part No.	Part Name & Description	Remarks
PC5701	B3PBA0000402	PHOTO COUPLER	[M] ⚠
PC5702	B3PBA0000402	PHOTO COUPLER	[M] ⚠
PC5720	B3PBA0000402	PHOTO COUPLER	[M] ⚠
PC5799	B3PBA0000402	PHOTO COUPLER	[M] ⚠
D5701	B0FBAR000041	DIODE	[M] ⚠
DZ5701	ERZV10V511CS	ZENER	[M] ⚠
TH5701	D4CAA5R10001	THERMISTOR	[M] ⚠
TH5860	D4CC11040013	THERMISTOR	[M] ⚠
L2101	J0JBC0000015	CHIP INDUCTOR	[M] ⚠
L2201	J0JBC0000015	CHIP INDUCTOR	[M] ⚠
L2802	J0JBC0000015	CHIP INDUCTOR	[M] ⚠
L2803	J0JBC0000015	CHIP INDUCTOR	[M] ⚠
L2804	J0JBC0000015	CHIP INDUCTOR	[M] ⚠
L2805	J0JBC0000015	CHIP INDUCTOR	[M] ⚠
L5001	G0B9R5K00003	CHOKE COIL	[M] ⚠
L5002	G0B9R5K00003	CHOKE COIL	[M] ⚠
L5201	G0B9R5K00003	CHOKE COIL	[M] ⚠
L5301	G0B9R5K00003	CHOKE COIL	[M] ⚠
L5500	J0JKB0000020	EMI BEAD CORE	[M] ⚠
L5501	J0JKB0000020	EMI BEAD CORE	[M] ⚠
L5702	ELF22V035B	COIL	[M] ⚠
L5721	J0JKB0000020	EMI BEAD CORE	[M] ⚠
T2900	G4D1A0000117	TRANSFORMER	[M] ⚠
T5701	ETS42BM15GAD	TRANSFORMER	[M] ⚠
T5751	ETS19AB236AG	TRANSFORMER	[M] ⚠
F1	K5D802APA008	FUSE	[M] ⚠

Reference No.	Part No.	Part Name & Description	Remarks
FP2902	K5H5012A0010	FUSE PROTECTOR	[M] ⚠
P5701	K2AB2B000010	JACK	[M] ⚠
A2	K2CB2CB00018	AC CORD	[M] ⚠
C5700	F1BAF1020020	1000P	[M] ⚠
C5701	ECQU2A334MLA	0.33	[M] ⚠
C5703	ECQU2A224MLC	0.22	[M] ⚠
C5704	F1BAF1020020	1000P	[M] ⚠
C5705	F1BAF1020020	1000P	[M] ⚠

2 Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution:

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

3 Precaution of Laser Diode

CAUTION:

This unit utilizes a Class I/Class II (P), Class 1M/Class 1 (PC) laser.

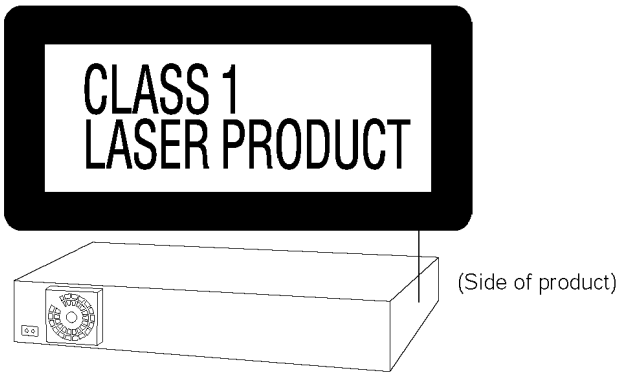
Invisible laser radiation is emitted from the optical pickup lens.

Wavelength: 662nm(DVD)/785nm(CD).

Maximum output radiation power from pickup: 100µW/VDE

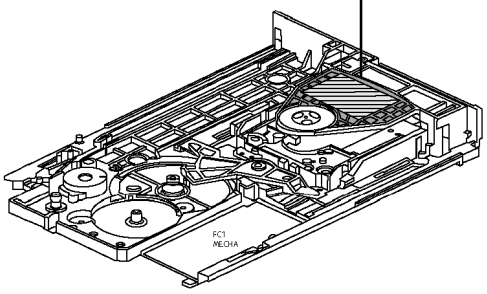
When the unit is turned on:

1. Do not look directly into the pick up lens.
2. Do not use optical instruments to look at the pick up lens.
3. Do not adjust the preset variable resistor on the pickup lens.
4. Do not disassemble the optical pick up unit.
5. If the optical pick up is replaced, use the manufacturer's specified replacement pick up only.
6. Use of control or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.



(Side of product)

LASER CAUTION LABEL
CAUTION – LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM. FDA 21 CFR / Class
CAUTION – CLASS 1M VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS. IEC60825-1 +A2/ Class 1M
VARNING – KLASS 1M SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN DIRECT GENOM OPTISKT INSTRUMENT.
FORSIGTIG – SYNLIG OG USYNLIG LASERSTRÅLING KLASS 1M, NÅR LÅGET ER ÅBENT. UNDGÅ AT SE LIGE PÅ MED OPTISKE INSTRUMENTER.
VARO! – AVATTAESSA OLET ALTTIINA LUOKAN 1M NÄKYVÄÄ JA NÄKYMÄTÖNTÄ LASERSÄTEILYÄ. ÄLÄ KATSO OPTISELLA LAITTEELLA SUORAAN SÄTEESEEN.
VORSICHT – SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG KLASSE 1M, WENN ABDECKUNG GEÖFFNET. NICHT DIREKT MIT OPTISCHEN INSTRUMENTEN BETRACHTEN.
ATTENTION – RAYONNEMENT LASER VISIBLE ET INVISIBLE CLASSE 1M, EN CAS D'OUVERTURE. NE PAS REGARDER DIRECTEMENT À L'AIDE D'INSTRUMENTS D'OPTIQUE.
注意 – ここを開くと可視及び不可視レーザ光が出ます。ビームを見たり、触れたりしないでください。
注意 – 打开时有可见及不可见激光辐射，避免光束照射。
GB7241.1-2001/3B 类
RQLXS0075



(Inside product on Mechanism unit)

CAUTION:
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

4 About Lead Free Solder (PbF)

4.1. Service caution based on legal restrictions

4.1.1. General description about Lead Free Solder (PbF)

The lead free solder has been used in the mounting process of all electrical components on the printed circuit boards used for this equipment in considering the globally environmental conservation.

The normal solder is the alloy of tin (Sn) and lead (Pb). On the other hand, the lead free solder is the alloy mainly consists of tin (Sn), silver (Ag) and Copper (Cu), and the melting point of the lead free solder is higher approx.30 degrees C (86°F) more than that of the normal solder.

Definition of PCB Lead Free Solder being used

The letter of “PbF” is printed either foil side or components side on the PCB using the lead free solder. (See right figure)	PbF

Service caution for repair work using Lead Free Solder (PbF)

- The lead free solder has to be used when repairing the equipment for which the lead free solder is used.
  (Definition: The letter of “PbF” is printed on the PCB using the lead free solder.)
- To put lead free solder, it should be well molten and mixed with the original lead free solder.
- Remove the remaining lead free solder on the PCB cleanly for soldering of the new IC.
- Since the melting point of the lead free solder is higher than that of the normal lead solder, it takes the longer time to melt the lead free solder.
- Use the soldering iron (more than 70W) equipped with the temperature control after setting the temperature at 350±30 degrees C (662±86°F).

Recommended Lead Free Solder (Service Parts Route.)

- The following 3 types of lead free solder are available through the service parts route.
  RFKZ03D01K----------(0.3mm 100g Reel)
  RFKZ06D01K----------(0.6mm 100g Reel)
  RFKZ10D01K----------(1.0mm 100g Reel)

Note

* Ingredient: tin (Sn), 96.5%, silver (Ag) 3.0%, Copper (Cu) 0.5%, Cobalt (Co) / Germanium (Ge) 0.1 to 0.3%

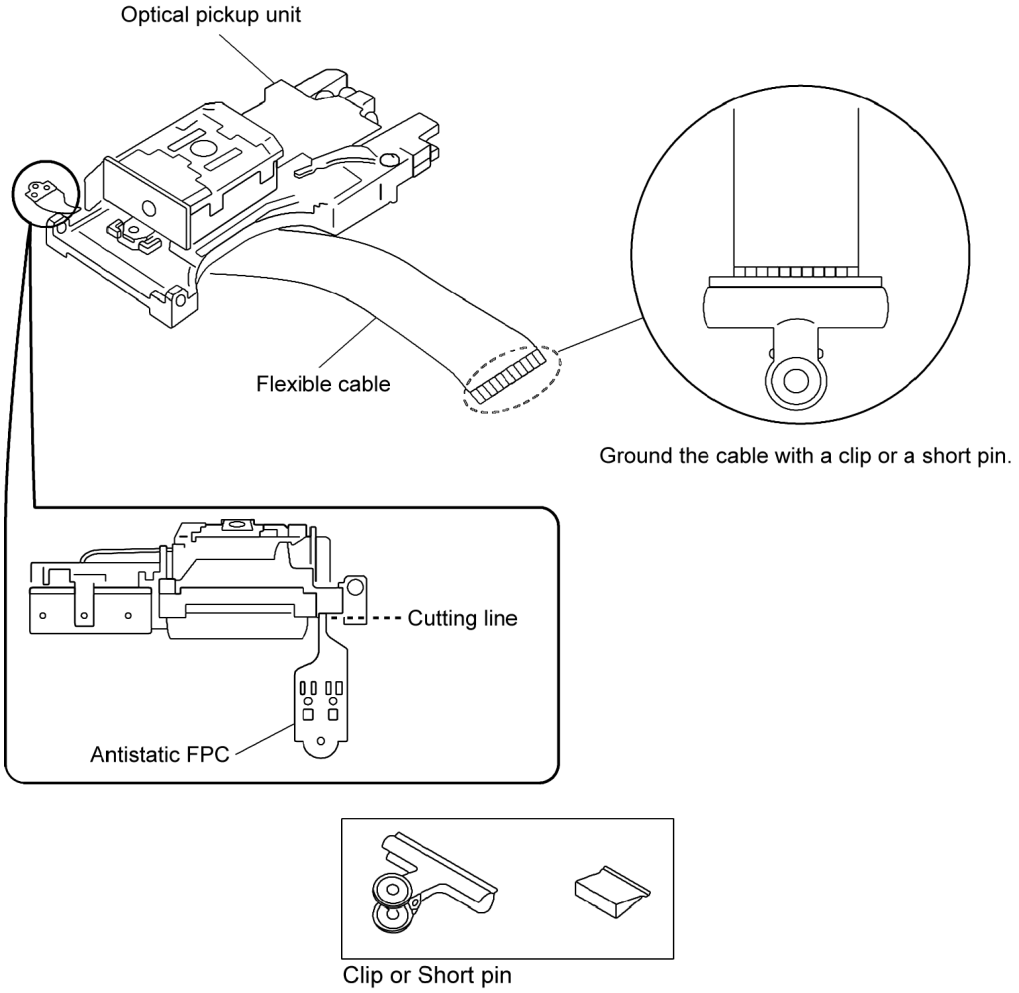
5 Handling Precautions for Traverse Unit

The laser diode in the optical pickup unit may break down due to static electricity of clothes or human body. Special care must be taken avoid caution to electrostatic breakdown when servicing and handling the laser diode.

5.1. Cautions to Be Taken in Handling the Optical Pickup Unit

The laser diode in the optical pickup unit may be damaged due to electrostatic discharge generating from clothes or human body. Special care must be taken avoid caution to electrostatic discharge damage when servicing the laser diode.

1. Do not give a considerable shock to the optical pickup unit as it has an extremely high-precise structure.
2. To prevent the laser diode from the electrostatic discharge damage, the flexible cable of the optical pickup unit removed should be short-circuited with a short pin or a clip.
3. The flexible cable may be cut off if an excessive force is applied to it. Use caution when handling the flexible cable.
4. The antistatic FPC is connected to the new optical pickup unit. After replacing the optical pickup unit and connecting the flexible cable, cut off the antistatic FPC.



5.2. Grounding for electrostatic breakdown prevention

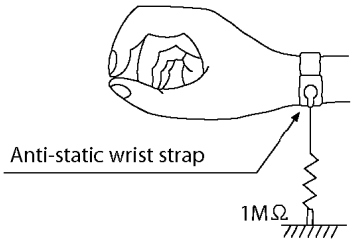
Some devices such as the DVD player use the optical pickup (laser diode) and the optical pickup will be damaged by static electricity in the working environment. Proceed servicing works under the working environment where grounding works is completed.

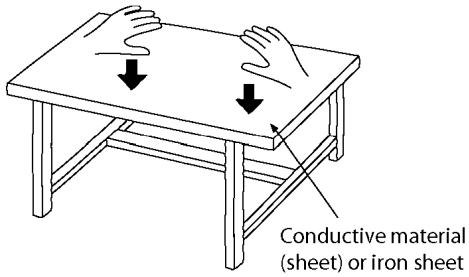
5.2.1. Worktable grounding

1. Put a conductive material (sheet) or iron sheet on the area where the optical pickup is placed, and ground the sheet.

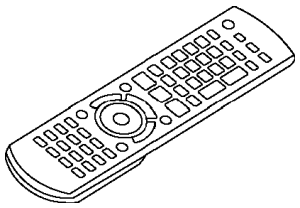
5.2.2. Human body grounding

1. Use the anti-static wrist strap to discharge the static electricity form your body.

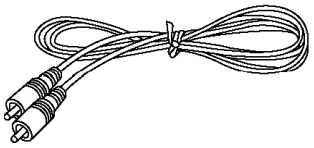

Anti-static wrist strap
1MΩ


Conductive material
(sheet) or iron sheet

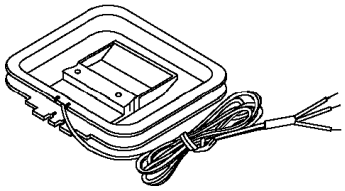
6 Accessories



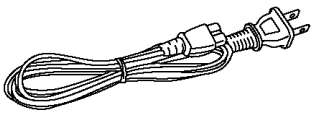
Remote control



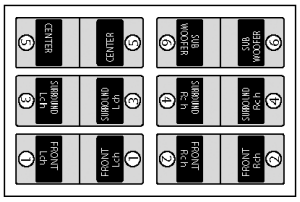
Video Cable



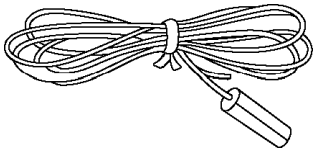
AM loop antenna



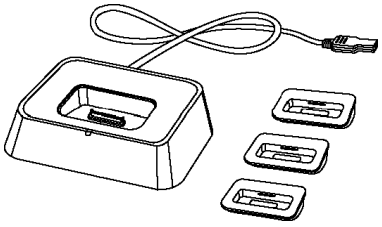
AC cord



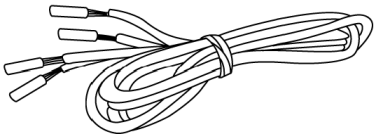
Speaker label



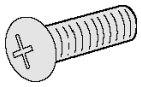
FM antenna



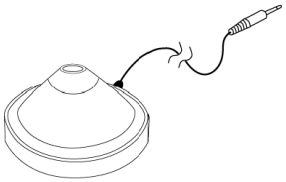
iPod cradle



Speaker cord



Screw



Calibration mic

7 Operation Procedures

7.1. Remote Control Key Buttons Operations

Select the source
[DVD]: DVD/CD
[TUNER/BAND]: FM/AM, XM
[>, < SELECT] : DVD/CD, FM/AM, XM, AUX/ MUSIC P./ OPTION

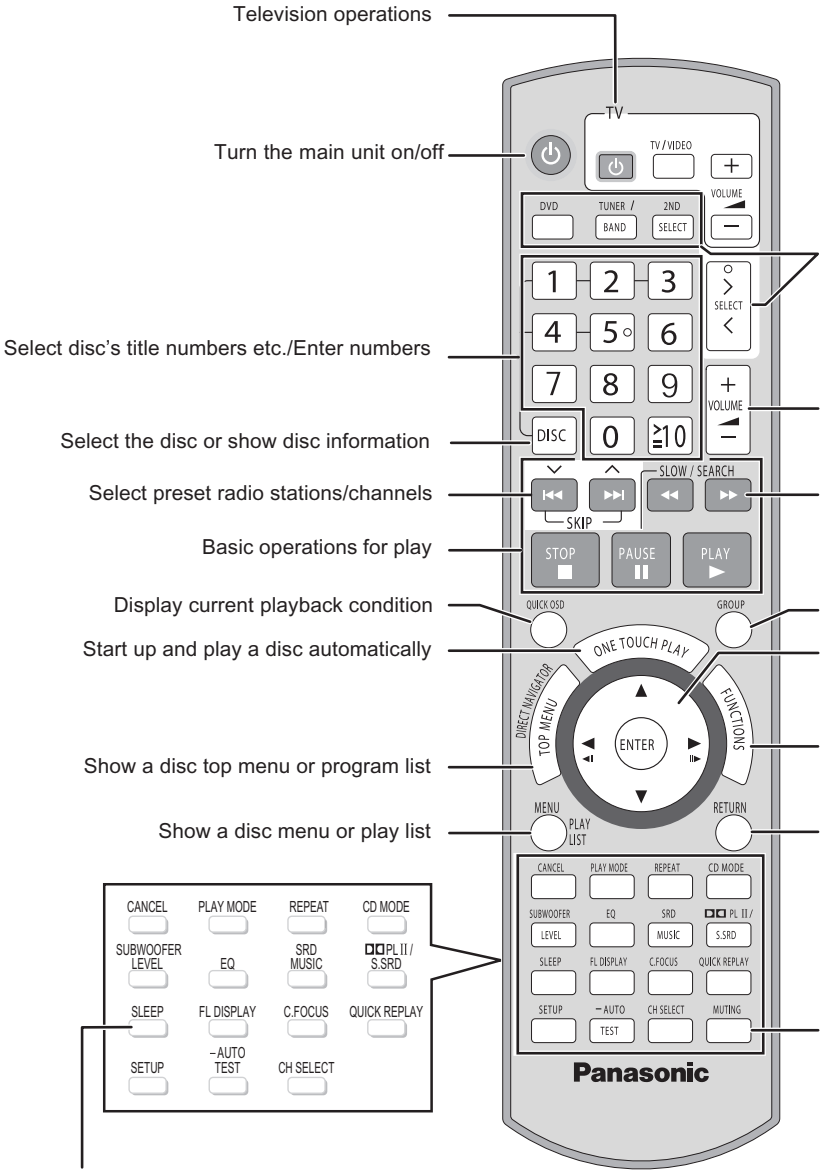
The below function is available only when using the optional Panasonic wireless sound system SH-FX85.

[2ND SELECT]: Change the source for the second room

MAIN SOURCE (follows the selected source for the main room)→(FM→AM)※→XM→OPTION→ Return to MAIN SOURCE

※ If the main room is in FM/AM mode, you can only select the same mode for the FM/AM tuner of the second room.

For details, refer to the operating instructions for the optional Panasonic wireless sound system SH-FX85.



Turn the unit off automatically (Sleep timer)
- The maximum setting is 120-min (in 30-min steps).
- Press the button again to confirm the remaining time on unit's display.
- To cancel, select "OFF" in the main unit's display.

Mute the sound
- "MUTING" flashes in the main unit's display while the function is on.
- To cancel, press the button again or adjust the volume.
- Muting is canceled when you switch the unit to standby.

7.2. Main Unit Key Buttons Operations

Standby/on switch [POWER ⏻/I]
Turn the main unit on/off.
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

5 DISC SELECTOR
Select a disc directly
- A disc indicator lights if a disc is detected or a tray is unchecked

■ / -TUNE MODE / —FM MODE
Stop playing/
Select the tuning mode
Adjust the FM reception condition

► / MEMORY
Play discs/
Memorize the receiving radio stations/channels

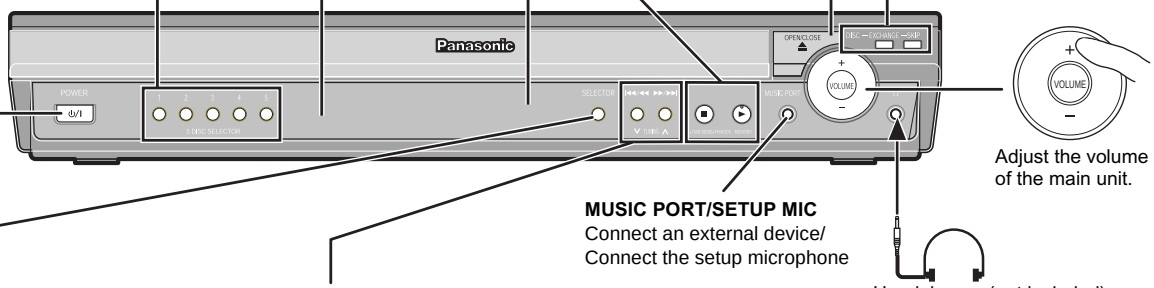
⏏ OPEN/CLOSE
Open/Close the disc drawer

DISC EXCHANGE
Open the disc drawer to exchange the disc in the play position

DISC SKIP
Skip to the next disc tray

Remote control signal sensor

Display



Adjust the volume of the main unit.

MUSIC PORT/SETUP MIC
Connect an external device/
Connect the setup microphone

SELECTOR
DVD/CD→FM→AM→XM→AUX→MUSIC P.→OPTION→Return to DVD/CD

⏮/◀◀ , ▶▶/⏭ / ∨ TUNING ∧
Skip or slow-search play/
Select the radio stations/channels

Headphones (not included)
Headphone plug type:
∅ 3.5 mm (1/8") stereo mini plug

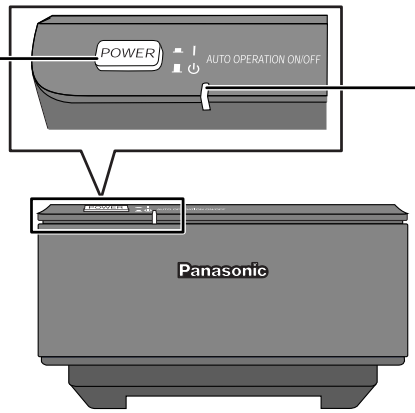
- Reduce the volume before connecting.
- Audio is automatically switched to 2-channel stereo.
- To prevent hearing damage, avoid listening for prolonged periods of time.

7.3. Wireless Surround

7.3.1. Wireless System Key Buttons Operations (SE-FX65)

Unit on/off button [POWER ▬ I, ▮ ⏻]
Use this button to turn unit on and off

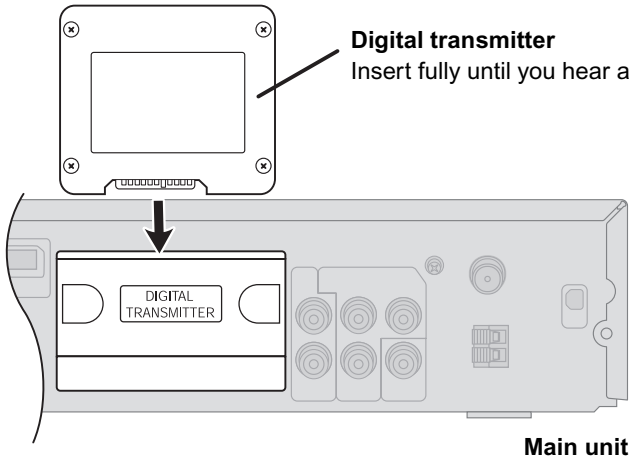
▬ I : This unit is on.
▮ ⏻ : This unit is off



AUTO OPERATION ON/OFF INDICATOR
The indicator lights red when the wireless system is turned on and lights green when the wireless link is activated.
When the wireless link is inactive for a long time, it turns red.

7.3.2. Digital Transmitter Connection (SH-FX65T)

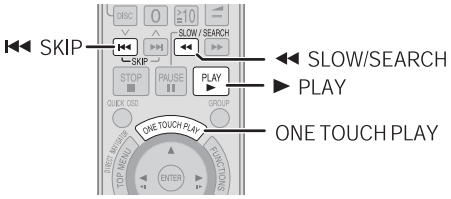
Do not insert or remove while the main unit is on.



Digital transmitter
Insert fully until you hear a click.

Main unit

7.4. Using the EZ Sync HDAVI Control



What is EZ Sync HDAVI Control?

EZ Sync HDAVI Control is a convenient function that offers linked operation of this unit and Panasonic TV (VIERA) with EZ Sync HDAVI Control. You can use this function by connecting the equipment with the HDMI cable. For operational details, see the operating instructions of the connected equipment.

This unit supports "HDAVI Control 2" function.

The TV with "HDAVI Control 2" function enables the following operation:

EZ Sync Control only with TV s remote control (for "HDAVI Control 2")(→ right)

Preparation

- Confirm that the HDMI connection (→ OI page 7) has been made.
- Set "EZ Sync" to "On" (→OI page 26, "HDMI" menu).
- To complete and activate the connection correctly, turn on all EZ Sync HDAVI Control compatible equipment and set the television to the corresponding HDMI input mode for the home theater system.

Whenever the connection or settings are changed, reconfirm the points above.

One touch play

You can turn on the home theater system and television, and start playing the disc in the play position with a single press of a button.

Press [ONE TOUCH PLAY].

Theater speakers will be automatically activated (→below).

- This function also works if you press [► PLAY] on the home theater remote control during home theater standby mode.

[Note]

Playback may not be immediately displayed on the television. If you miss the beginning portion of playback, press [⏮] or [◀◀] to go back to where playback started.

Auto input switching

- When you switch the television input to:
  - TV tuner mode, the home theater system will automatically switch to "AUX"※.
  - HDMI input mode for the home theater system, the home theater system will automatically switch to "DVD/CD" if it is in "AUX"※ mode.
- When you start disc play, the television will automatically switch to the HDMI input mode for the home theater system.

※ To toggle the mode that this function works with, press [SETUP] while the main unit is in "AUX" or "D-IN" mode.
- The default setting is "AUX".

Speaker control

You can select whether audio is output from the home theater system or the television speakers by using the television menu settings. For details, refer to the operating instructions of your television.

Home theater

Theater speakers are active.

- When the home theater system is in standby mode, changing the television speakers to theater speakers in the televison menu will automatically turn the home theater system on and select "AUX"※ as the source.
- The television speakers are automatically muted.
- You can control the volume setting using the volume or mute button on the TV s remote control. (The volume level is displayed on the main unit s FL display.)
- To cancel muting, you can also use the home theater remote control (→ OI page 12).
- If you turn off the home theater system, television speakers will be automatically activated.

TV

Television speakers are active.

- The volume of the home theater system is set to "0".
  This function works only when "DVD/CD" or "AUX"※ is selected as the source on the home theater system.
- Audio output is 2-channel audio.

- When switching between the theater and television speakers, the TV screen may be blank for several seconds.

※ To toggle which input source the main unit will automatically switch to, press [SETUP] while the main unit is in "AUX" or "D-IN" mode.
The default setting is "AUX".

Power off link

When the television is turned off, the home theater system goes into standby mode automatically.

- This function works only when "DVD/CD" or "AUX"※ is selected as the source on the home theater system.
- When the television is turned on, the home theater system does not turn on automatically. (Power on link is not available.)

※ For "AUX" or "D-IN" mode, power off link can be set to work with one or the other. To toggle the mode that this function works with, press [SETUP] while the main unit is in "AUX" or "D-IN" mode.
The default setting is "AUX".

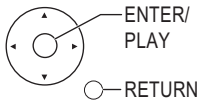
[Note]

Only the home theater system turns off when you press [⏻] for shutting it down. Other connected equipment compatible with EZ Sync HDAVI Control stay on.

EZ Sync Contol only with TV's remote control (for "HDAVI Control 2")

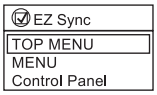
You can control the disc menus of the home theater system with the TV s remote control when using the "DVD/CD" source. When operating the TV s remote control, refer to the below illustration for operation buttons.

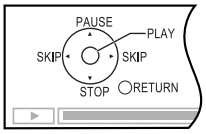
1 Select the theater operation menu by using the television menu settings.
(For details, refer to the operating instructions of your television.)
- The home theater system will automatically switch to "DVD/CD" if it is in "AUX"※ mode.



※ To toggle the mode that this function works with, press [SETUP] while the main unit is in "AUX" or "D-IN" mode.
The default setting is "AUX".

2 Select the desired item.
- **"TOP MENU":** Shows a disc top menu (→ OI page 17, 20) or program list (→OI page 21).
- **"MENU":** Shows a disc menu (→ OI page 17, 20) or play list (→OI page 21).
- **"Control Panel":** The basic operations for discs are available.

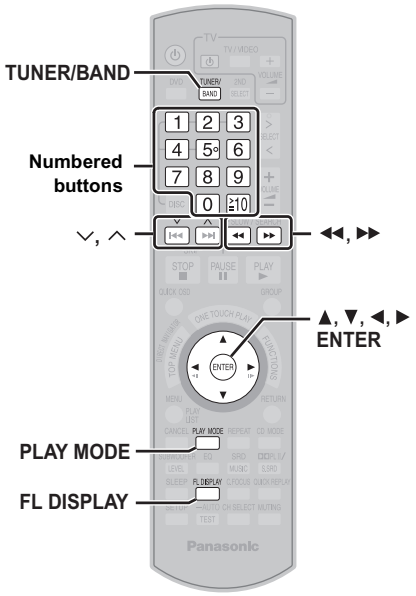


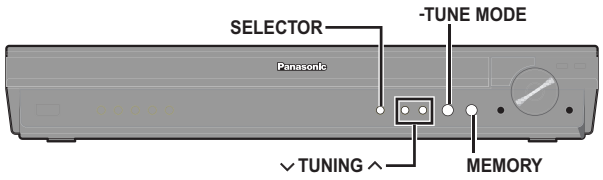


[Note]

- Depending on the menu, some button operations cannot be performed from the TV s remote control.
- "Control Panel" can be selected directly by using a button on the TV s remote control (e.g. [SUB MENU]).

7.5. Using the XM® Satellite Radio





Radio operations are described mainly with the remote control.
You can alternatively use the corresponding button on the main unit.

*1 [SELECTOR] *2 [X TUNING W] *3 [MEMORY] *4 [-TUNE MODE]

XM Satellite Radio

XM Satellite Radio is the provider of satellite radio. XM offers more than 170 digital radio channels with music, talk, news, sports, comedy, traffic and weather reports. To enjoy XM Satellite Radio, subscription is required.
For more information, visit XM on the Web at www.xmradio.com for U.S. customers, or www.xmradio.ca for Canada customers.

How to Subscribe

XM monthly service subscription sold separately. XM Connect & Play antenna, or XM Passport Mini-Tuner and Home Dock (includes home antenna) required to receive XM service (sold separately). Channels with frequent explicit language are indicated with an XL. Channel blocking is available for XM radio receivers by calling 1-800-XMRADIO (U.S. residents) or
1-877-GET-XMSR (Canada residents). Subscriptions subject to Customer Agreement available at xmradio.com (U.S. residents) and xmradio.ca (Canada residents). Only available in the 48 contiguous United States and Canada. C 2006 XM Satellite Radio Inc. All rights reserved. All other trademarks are the property of their respective owners.

- To subscribe in the U.S., visit XM on the Web at www.xmradio.com or call XM s Listener Care at 1-800-XMRADIO (1-800-967-2346).
  To subscribe in Canada, visit XM on the Web at www.xmradio.ca or call XM s Listener Care at 1-877-GET-XMSR (1-877-438-9677).

  You should have your Radio ID ready (→right).

Preparation

■ The XM Satellite Radio ID

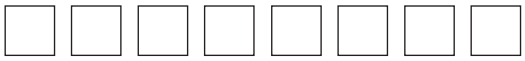
Please confirm your XM Satellite Radio ID necessary for activating XM Satellite Radio as follows.

1 Press [TUNER/BAND]*1 to select "XM".
- Ensure the antenna is connected (OI page 8).

2 Press [PLAY MODE]*4 to select "MANUAL".
Each time you press the button: MANUAL ⟷ PRESET

3 Press [0] to select "XM 0" (XM channel 0).
"RADIO ID"is indicated in the display briefly, followed by an 8-digit alphanumeric ID.

4 Note your XM Satellite Radio ID.
- To avoid ambiguity, the letters I, O, S and F are not used in the ID.



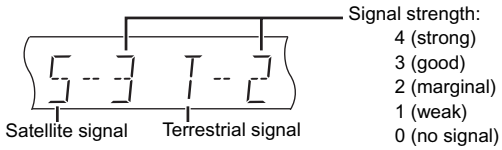
- To exit, press [◀◀, ▶▶]*2 to select another channel.

■ Optimizing the XM signal reception

The main unit has a signal strength indicator function that allows you to optimize the XM signal reception.

1 Press [TUNER/BAND]*1 to select "XM".
- Ensure the antenna is connected (OI page 8).

2 Press and hold [FL DISPLAY] until the XM signal status is displayed.



3 Position the antenna for the best possible satellite signal reception.
The display changes depending on the signal strength.
- If the satellite signal is weak or not available, you can optimize for the terrestrial signal (where available).

4 Press [FL DISPLAY] to return to the previous display.

Tips for optimizing reception

- To prevent interference with wireless equipment, place the antenna away from this unit, Panasonic wireless sound system SH-FX80/SH-FX85, Panasonic wireless system SH-FX50/SH-FX60/SH-FX65, and other equipment that emits radio waves (such as radio equipment and microwave ovens).
- Place the antenna near a south-facing window with an unobstructed view of the sky for the best satellite signal reception.
- Refer also to the operating instructions of your XM antenna.

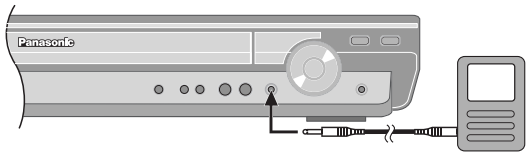
7.6. Using the Music Port

Preparation

- To avoid distorted sound, make sure that any equalizer function of your external device is turned off.
- Reduce the volume of the main unit and external device.

1 Connect the external device (not included).

Plug type: ∅3.5 mm (1/8") stereo mini plug



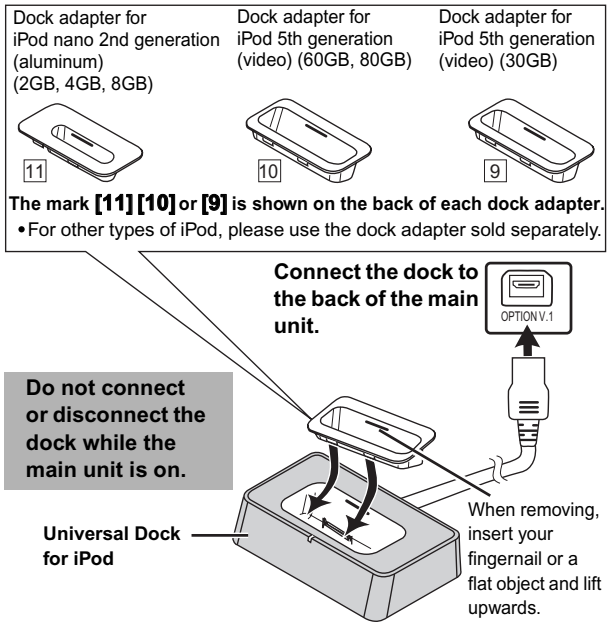
External device
(e.g. MP3 player)

2 Press [>, < SELECT] repeatedly to select "MUSIC P.".

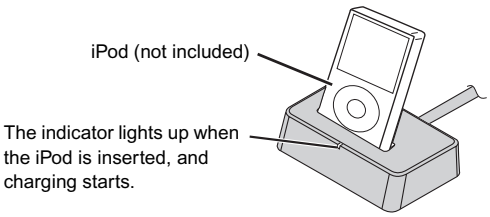
- Adjust the volume on the external device to a normal listening level, and then adjust the volume of the main unit.
- You can enjoy sound from all speakers when you press [SRD MUSIC] to turn on Surround Music (→ 𝕀 page 32).

7.7. About iPod

7.7.1. iPod Connection


Dock adapter for iPod nano 2nd generation (aluminum) (2GB, 4GB, 8GB)
Dock adapter for iPod 5th generation (video) (60GB, 80GB)
Dock adapter for iPod 5th generation (video) (30GB)
11
10
9
The mark [11] [10] or [9] is shown on the back of each dock adapter.
• For other types of iPod, please use the dock adapter sold separately.
Connect the dock to the back of the main unit.
OPTION V.1
Do not connect or disconnect the dock while the main unit is on.
Universal Dock for iPod
When removing, insert your fingernail or a flat object and lift upwards.

■ Charging the iPod



Charging time

iPod nano 2nd generation (aluminum) iPod 5th generation (video) iPod nano 1st generation	Until iPod is fully charged
iPod 4th generation (color display) iPod 4th generation iPod mini	5 hours (fixed)

[Note]

- AC cord must be connected with the main unit.
- "OPTION✳" will be shown on the main unit's display during iPod charging in main unit standby mode. It will go off when charging is finished.
  For the above models under "fixed 5-hour charging", "OPTION✳" continues to be displayed throughout this duration, even when your iPod is fully charged. You can turn off this display by removing the iPod from the dock.
- Compatibility depends on the software version of your iPod.

7.7.2. Using the iPod

Preparation

- Adjust the volume on the iPod to a normal listening level.
- Reduce the volume of the main unit.
- Confirm the iPod connection (→ OI page 10).

1 Press [>, < SELECT] repeatedly to select "OPTION".
The iPod turns on.

2 Press [► PLAY] to play the iPod.
- Adjust the volume of the main unit.
- You can enjoy surround sound when you press [DD PLⅡ/S.SRD] to turn on Super Surround (→ OI page 32).

PAUSE STOP Alternatively, press [■] on the main unit.	To pause track
(During play/pause) Alternatively, press [⏮/◀◀ , ▶▶/⏭] on the main unit.	To skip a track
(During play/pause) or press and hold Alternatively, press and hold [⏮/◀◀ , ▶▶/⏭] on the main unit.	To search the current track

When you select another source, or turn the main unit off, the iPod turns off.

[Note]
Image/video display through the home theater is not available.

Compatible iPod

Name	Memory size
iPod nano 2nd generation (aluminum)	2GB, 4GB, 8GB
iPod 5th generation (video)	60GB, 80GB
iPod 5th generation (video)	30GB
iPod nano 1st generation	1GB, 2GB, 4GB
iPod 4th generation (color display)	40GB, 60GB
iPod 4th generation (color display)	20GB, 30GB
iPod 4th generation	40GB
iPod 4th generation	20GB
iPod mini	4GB, 6GB

- Compatibility depends on the software version of your iPod.

7.8. Disc Information

7.8.1. Disc Playability (Media)

Commercial discs

Disc	Logo	Indicated in these instructions by	Remarks
DVD-Video		[DVD-V]	High quality movie and music discs
Video CD		[VCD]	Music discs with video Including SVCD (Conforming to IEC62107)
CD		[CD]	Music discs

Recorded discs (○: Playable, ×: Not playable)

Disc	Logo	Recorded on a DVD video recorder, etc.		Recorded on a personal computer, etc.			Finalizing ×6
		[DVD-VR] ×2	[DVD-V] ×4	[WMA]	[MP3]	[JPEG]	
DVD-RAM		○	—	×	○	○	Not Necessary
DVD-R/RW		○	○	×	○	○	Necessary
DVD-R DL		○ ×3	○	×	×	×	Necessary
+R/+RW	—	×	(○) ×5	×	×	×	Necessary
+R DL	—	×	(○) ×5	×	×	×	Necessary
CD-R/RW ×1	—	—	—	○	○	○	Necessary ×7

- It may not be possible to play all the above-mentioned discs in some cases due to the type of disc, the condition of the recording, the recording method, or how the files were created [→ Refer to Section 7.8.2. File Extension Type Support (WMA/MP3/JPEG)]

×1 This unit can play CD-R/RW recorded with CD-DA or Video CD format.
[WMA] [MP3] [JPEG] This unit also plays HighMAT discs.
×2 Discs recorded on DVD video recorders or DVD video cameras, etc. using Version 1.1 of the Video Recording Format (a unified video recording standard).
×3 Discs recorded on DVD video recorders or DVD video cameras using Version 1.2 of the Video Recording Format (a unified video recording standard).
×4 Discs recorded on DVD video recorders or DVD video cameras using DVD-Video Format.
×5 Recorded using a format different from DVD-Video Format, therefore some functions cannot be used.
×6 A process that allows play on compatible equipment. To play a disc that is indicated as "Necessary", the disc must first be finalized on the device it was recorded on.
×7 Closing the session will also work.

■ Discs that cannot be played

DVD-RW version 1.0, DVD-Audio, DVD-ROM, CD-ROM, CDV, CD-G, SACD, DivX Video Disc and Photo CD, DVD-RAM that cannot be removed from their cartridge, 2.6-GB and 5.2-GB DVD-RAM, and "Chaoji" VCD available on the market including CVD, DVCD, and SVCD that do not conform to IEC62107.

Note about using a DualDisc

The digital audio content side of a DualDisc does not meet the technical specifications of the Compact Disc Digital Audio (CD-DA) format so playback may not be possible.

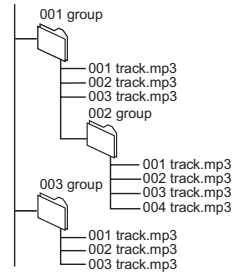
7.8.2. File Extension Type Support (WMA/MP3/JPEG)

Format	Disc	Extension	Reference
[WMA]	CD-R/RW	".WMA" ".wma"	● Compatible compression rate: between 48 kbps and 320 kbps ● You cannot play WMA files that are copy-protected. ● This unit does not support Multiple Bit Rate (MBR: an encoding process for audio content that produces an audio file encoded at several different bit rates).
[MP3]	DVD-RAM DVD-R/RW CD-R/RW	".MP3" ".mp3"	● Compatible compression rate: between 32 kbps and 320 kbps for sampling frequencies of 32 kHz and above between 8 kbps and 160 kbps for sampling frequencies of 24 kHz and below ● This unit does not support ID3 tags. ● Compatible sampling frequencies: DVD-RAM, DVD-R/RW: 11.02, 12, 22.05, 24, 44.1 and 48 kHz CD-R/RW: 8, 11.02, 12, 16, 22.05, 24, 32, 44.1 and 48 kHz
[JPEG]	DVD-RAM DVD-R/RW CD-R/RW	".JPG" ".jpg" ".JPEG" ".jpeg"	● JPEG files taken on a digital camera that conform to DCF Standard (Design rule for Camera File system) Version 1.0 are displayed. Files that have been altered, edited or saved with computer picture editing software may not be displayed. ● This unit cannot display moving pictures, MOTION JPEG and other such formats, still pictures other than JPEG (e.g. TIFF), or play pictures with attached audio.

- When there are more than 8 groups, the eighth group onwards will be displayed on one vertical line in the menu screen.
- There may be differences in the display order on the menu screen and computer screen.
- This unit cannot play files recorded using packet write.

Naming folders and files
(Files are treated as contents and folders are treated as groups on this unit.)
At the time of recording, prefix folder and file names. This should be with numbers that have an equal number of digits, and should be done in the order you want to play them (this may not work at times).

e.g. [MP3]
root



DVD-RAM
- Discs must conform to UDF 2.0.

DVD-R/RW
- Discs must conform to UDF bridge (UDF 1.02/ISO9660).
- This unit does not support multi-session. Only the default session is played.

CD-R/RW
- Discs must conform to ISO9660 level 1 or 2 (except for extended formats).
- This unit supports multi-session but if there are many sessions it takes more time for play to start. Keep the number of sessions to a minimum to avoid this.

8 New Features

8.1. About HDMI

8.1.1. What is HDMI?

AN INTERFACE DESIGNED FOR THE DIGITAL REVOLUTION

From broadcast equipment to TVs, the AV world is going digital. As this digital revolution unfolds, there's a growing need for an interface that digitally transmits signals between connected equipment. The solution: HDMI, or High-Definition Multimedia Interface.

HDMI transmits digital video and audio signals at speeds up to 5 Gps without compr essing them. It supports high-definition images up to 1080p and high-quality , multi-channel audio formats such as DVD-Audio. And it provides all this performance with the ease of connecting a single cable.

Also equipped with a copyright protection function, HDMI is a simple, high-performance interface that supports the growing digital age.

HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

FOUNDERS

HITACHI
Panasonic
PHILIPS
SILICON IMAGE
SONY
THOMSON
TOSHIBA

HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

1. ADVANCED DIGITAL PICTURES

Digital transmission of video signals helps maximize the quality of HDTV images.

2. ADVANCED DIGITAL SOUND

Digital transmission of multi-channel audio signals, such as DVD-Audio signals, provides an exceptionally pure sound.

3. EASY TO USE

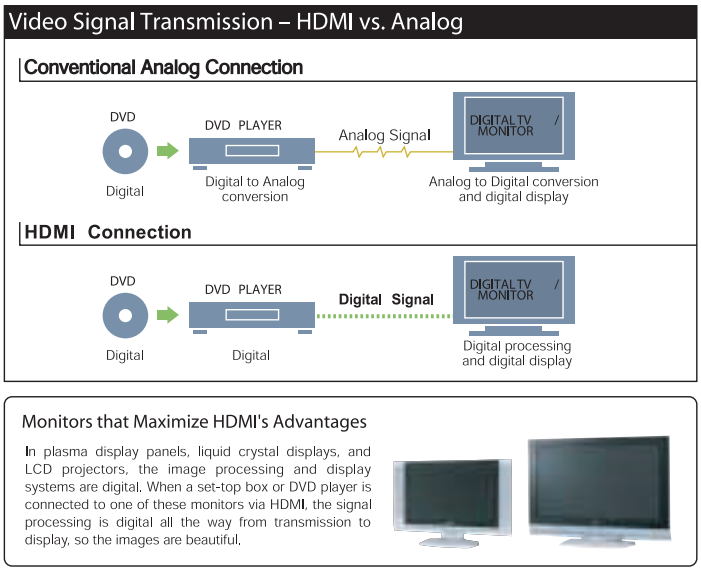
Both video and audio signals are transmitted over a single cable, so connection is easier and there's less clutter.

	Video Signal Type	Audio Signal	Copyright Pr otection	Signal Compr ession
HDMI	Digital	●	●	Without compr ession
IEEE 1394	Digital	●	●	Compression
DVI + HDCP	Digital	–	●	Without compression
DVI	Digital	–	–	Without compression

8.1.2. Advanced Digital Pictures

Compare HDMI connection with conventional analog connection, using the DVD player as an example. With an analog connection, the digital signal from the DVD player is converted to analog and sent to the TV, then converted back to digital and displayed. Inevitably, there is some loss of picture quality due to conversion errors and to noise and signal degradation that occurs as the signal travels through the cable.

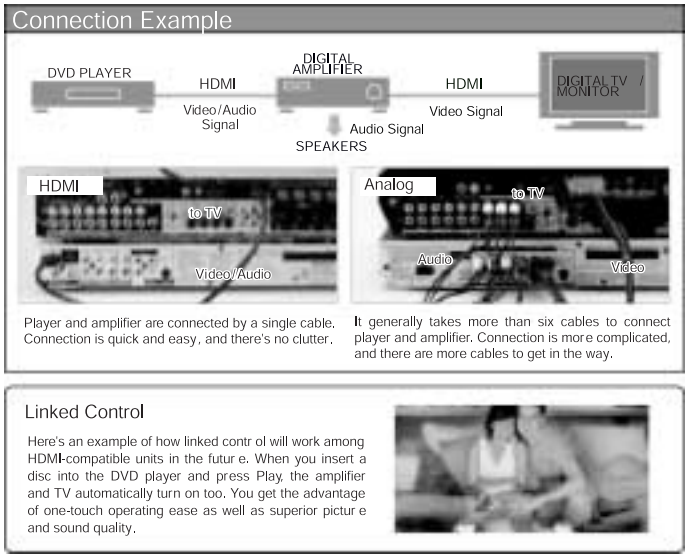
With HDMI, on the other hand, the DVD signal is transmitted to the TV in its original digital form. There is no conversion from digital to analog and back, and thus no quality loss from conversion errors. Image quality is thus higher. Plus, because HDMI supports 480p, 1080i, and up to 1080p high-definition images with copy protection, it produces images with quality that is ideal for large-screen viewing.



Monitors that Maximize HDMI's Advantages
In plasma display panels, liquid crystal displays, and LCD projectors, the image processing and display systems are digital. When a set-top box or DVD player is connected to one of these monitors via HDMI, the signal processing is digital all the way from transmission to display, so the images are beautiful.

8.1.3. Advanced Digital Sound

The super-high-quality linear PCM sound provided by DVD-Audio is not given its full potential when the digital signal is transmitted through an analog cable.
With a conventional analog connection, the digital signal carrying DVD-Audio's detailed audio data is converted to analog before being sent to the amplifier and output. Sound quality is diminished due to noise and signal degradation.
HDMI, on the other hand, transmits the signal in its original digital form, so the sound is extremely pure. HDMI also supports up to eight channels of multi-channel sound. Plus, it connects the player and amplifier with a single cable, rather than the multiple cables needed in conventional connection.


Connection Example
DVD PLAYER
HDMI
DIGITAL AMPLIFIER
HDMI
DIGITAL TV / MONITOR
Video/Audio Signal
Video Signal
Audio Signal
SPEAKERS
HDMI
to TV
Video/Audio
Analog
to TV
Audio
Video
Player and amplifier are connected by a single cable. Connection is quick and easy, and there's no clutter.
It generally takes more than six cables to connect player and amplifier. Connection is more complicated, and there are more cables to get in the way.
Linked Control
Here's an example of how linked contr ol will work among HDMI-compatible units in the futur e. When you insert a disc into the DVD player and press Play, the amplifier and TV automatically turn on too. You get the advantage of one-touch operating ease as well as superior pictur e and sound quality.

8.1.4. Easy to Use

HDMI transmits both video and audio signals over a single cable, so connection is quick and easy and the area around the TV remains uncluttered. Also, when each of the connected units is HDMI-compatible, control signals can be exchanged among them. This means that, in the future, it will be possible to operate several units from a single remote control, or to operate several units via linked control.

8.1.5. HDMI Compatible Products

8.2. Wireless Features

8.2.1. Function Overview

Year 2007 PT models support wireless which includes FX65/FX66, wireless subwoofer and FX85 as described below:-

8.2.1.1. FX65/FX66

- The FX65/FX66 supports one-way wireless transmission only, that is, it will only transmit wireless audio signal to the rear surround speakers. The FX65/FX66 receiver module includes a D-AMP and SMPS. The transmitter interfaces with the main unit using serial communications to communicate information such as mute command request, link detection and ID setting request. Maximum range attainable is 15 meters.

8.2.1.2. Wireless Subwoofer (For PT1050 only)

- The wireless subwoofer receiver module is similar in operation with FX65/FX66 in such a way that it only supports one-way wireless transmission. It also includes a D-AMP and SMPS. The difference in the wireless subwoofer receiver module is the way its hardware interprets the audio it receives from the transmitter since it is the same audio received by the FX65/FX66 receiver. Maximum range attainable is 30 meters.

8.2.1.3. FX85

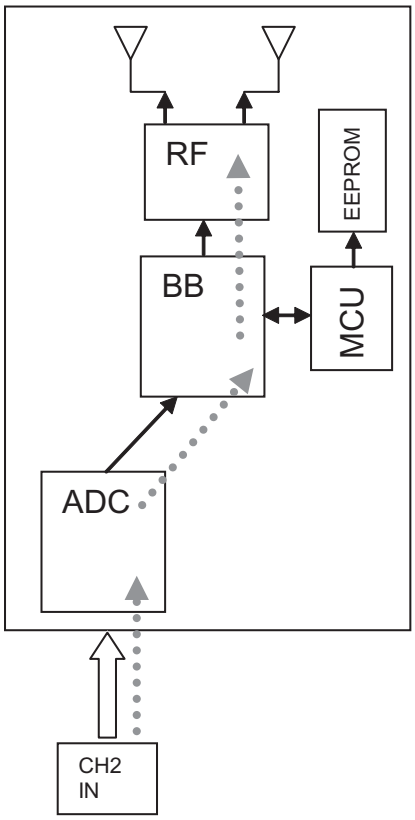
- The FX85 supports the multi-room function wherein it operates as a second room wireless receiver (up to a maximum of two). Maximum range attainable is 30 meters. It can send commands to the main unit to control functions such as Play, Stop, Forward Skip/Channel Up, Reverse Skip/Channel Down. It also has a built-in DAP pocket for stand-alone operation by inserting a DAP device (e.g. iPod) in the DAP pocket to play the device only via the device's own control buttons, FX85 cannot control the device using its own buttons. The transmitter interfaces with the main unit using serial communications to communicate information such as mute command request, link detection, ID setting request and button commands from the FX85 buttons (Play, Stop, Forward Skip/Channel Up, Reverse Skip/Channel Down). The FX85 receiver module has the following functions/terminals/buttons:

FX85 BUTTONS	FX85 FUNCTIONS
FX 85 Power Button	D-Amp
Selector Button	SMPS
Play Button	D-Port Connector
Stop Button	ID Set Switch
Forward Skip/Channel Up	MPort
Reverse Skip/Channel Down	
Volume Control	

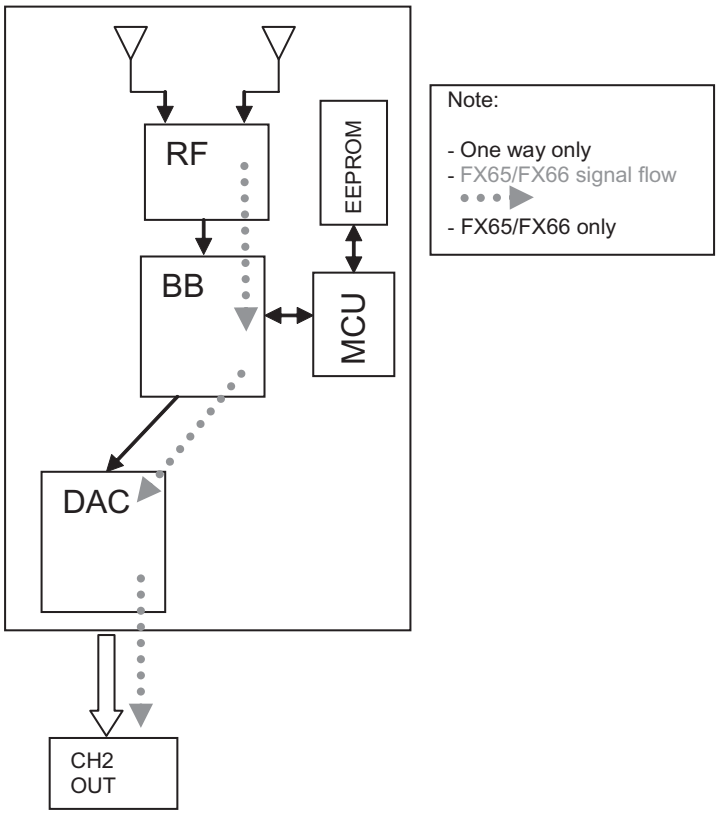
8.2.2. Block Diagram

・There are two types of transmitter cards, Type A and Type B, and two types of receiver modules, Type 1 and Type 2 for the wireless configuration. The block diagrams below describe the differences of each of the types.

8.2.2.1. TX-TYPE A / RX-TYPE 1



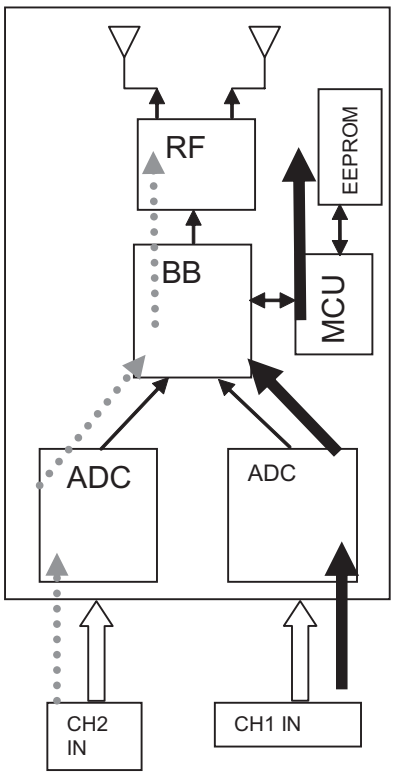
TX – Type A



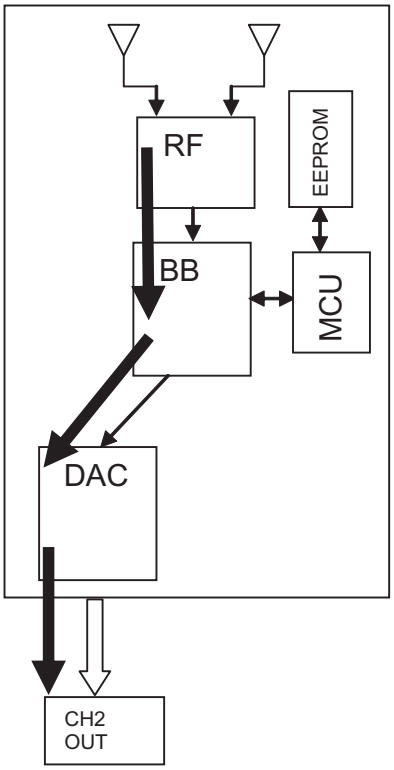
RX – Type 1

・Type A transmitter uses one ADC (Analog to Digital Converter) and transmits audio through Channel 2. Type 1 receiver (Rx) uses one DAC and output audio through Channel 2. The firmware (that is downloaded to EEPROM IC) multiplexes which channel to listen to (in this case Channel 2 since type A is transmitting from channel 2 In) by setting the baseband accordingly.

8.2.2.2. TX-TYPE B / RX-TYPE 2



TX – Type B



RX – Type 2

Note:
- FX65/FX66 SIGNAL FLOW
- **FX85 SIGNAL FLOW**
- ONE WAY AND SIMULTANEOUS
- FX65/FX66 + FX85
- FX65/FX66 TRANSMITTER NOT USED, NEED TO IDSET FX65/FX66
- TX TYPE B BUT RX CHANGED FROM TYPE 2 TO TYPE 1, CH1 SIGNAL REDIRECTED TO DAC

· Type B transmitter uses two ADC (Analog to Digital Converter) to send audio streams from Channel 1 and Channel 2 for the FX65/FX66 surround sound and FX85 second room audio, respectively. Type 2 receiver outputs audio through Channel 2. The software multiplexes which channel to listen to by setting the baseband accordingly. For example, if the receiver is configured as an FX85 receiver (Type 2), the baseband is configured to accept Channel 1 audio transmission and redirect it to Channel 2 Out. If the receiver is set as an FX65/FX66 or wireless subwoofer, the baseband is configured to accept channel 2 audio transmission and redirect it to the same Channel 2 Out.

8.2.3. Activation

· FX65/FX66 can be activated in the main unit by using either transmitter Type A or Type B and enabling surround sound by selecting Surround Music, DPL or Super Surround (Music/Movie).

· FX85 Wireless feature is enabled by default when the user uses transmitter type B.

8.2.4. LED Indication

· For FX65/FX66, there will be two-color LED that will be used to indicate Power On and Link. If link, the two-color LED will be green, else, it will be red.

For FX85, the front panel will have LED indicators for Standby,, Wireless Link, Charge, Option and Music Port. During Power On, Standby LED will be OFF. Only during power OFF will this LED be ON (Red). Wireless Link indicator will be ON (Green) when link is established between TX and RX and OFF when link is lost. Pressing the selector button will toggle from any of the selector modes Wireless, Option and Music port. Only the currently selected mode will be ON (Green), the other two will be OFF. Charge LED will be ON (Red) once iPod charging is initiated.

8.2.5. Key Operation (FX85)

· **Selector Button**

This button will be used to select Wireless, Option or M.Port and enabling the corresponding LED indicators for each mode. During Power On, by default, selector mode is set to Wireless when power is initially supplied to the system. But during Power On/OFF button, it will remember the last selector mode setting.

· **Play Button**

This button will send command to the main unit to play CD/DVD as well as the iPod. This function is therefore meaningful only

if the second room selector is in Main Source (with the first room user in CD/DVD or iPod) and iPod.

· Stop Button

This button will send command to the main unit to stop CD/DVD as well as the iPod. This function is therefore meaningful only if the second room selector is in Main Source (if the first room user is in CD/DVD mode or iPod) and iPod.

· Forward Skip/Channel Up

This button depends on the second room source currently selected. It will be interpreted as a Forward Skip by the main unit if the second room source is in Main Source (with the first room user is in CD/DVD or iPod mode) and iPod. It will be interpreted as a Channel Up (preset channels only) if the second room source is in FM, AM, or XM.

· Reverse Skip/Channel Down

This button depends on the second room source currently selected. It will be interpreted as a Reverse Skip by the main unit if the second room source is in Main Source (if the first room user is in CD/DVD or mode) and iPod. It will be interpreted as a Channel Down (preset channels only) if the second room source is in FM, AM, or XM.

· Volume Control

Volume control will be local to the FX85 module only. Default volume (TBD) will be set every time power is first supplied to the system or during exit from stand by mode.

· ID-setting Operation

ID setting operation can be invoked by pressing fast-forward key in the main unit and three [3] key in the remocon. Once ID-setting is triggered, the receiver must press its ID-setting button within 60 seconds. During this period, the transmitter will be in open connect mechanism whereby any receiver can pair with the transmitter. After this period elapsed, the transmitter will revert back to using close connect code whereby only those receivers which have the same ID as the transmitter will be able to link. The user also has the option to exit the ID setting operation by pressing the same keys.

· iPod Detection and Charging

iPod is detected once inserted on the FX85 and battery charging automatically starts.

– The iPod Charging in Standby Mode:

lUpon iPod insertion detection and FX85 is in Power OFF (stand by), FX85 set will enter iPod charging Standby Mode.

lThe FX85's CHARGE LED will light up whenever the iPod is charging.

lFX85 will charge the battery up to five hours. After this period, FX85 will not try to recharge the iPod.

lAfter battery full condition, even if the iPod is operated such as play, FX85 will not retry to recharge the iPod (timer will start immediately once iPod is inserted).

lRe - charging of the battery in iPod Charging Standby Mode can be done only by removing and reinserting the iPod to the dock.

– The iPod charging in Power On Mode:

lThe iPod automatically charges its battery whenever it is connected during Power ON.

lThe FX85's CHARGE LED will light up whenever the iPod is charging.

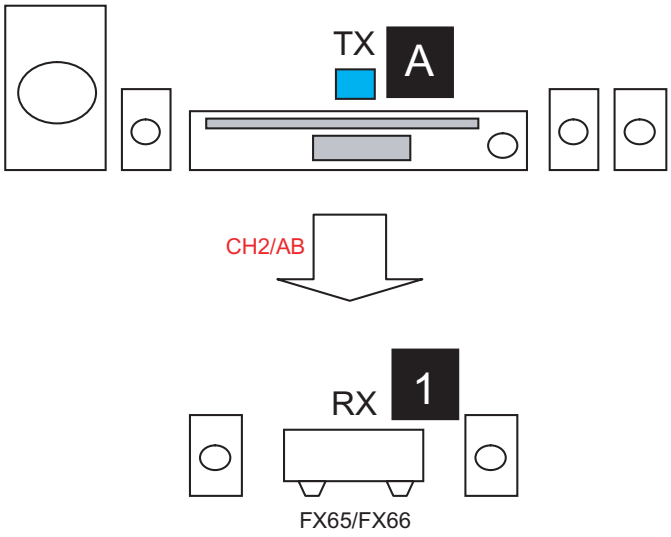
lFX85 will continue charging the iPod as long as it is inserted (no charging time limit of five hours).

8.2.6. FX Configurations

There are four types of configurations for the FX series. This is explained by the following illustrations below:

Case 1: FX65/FX66

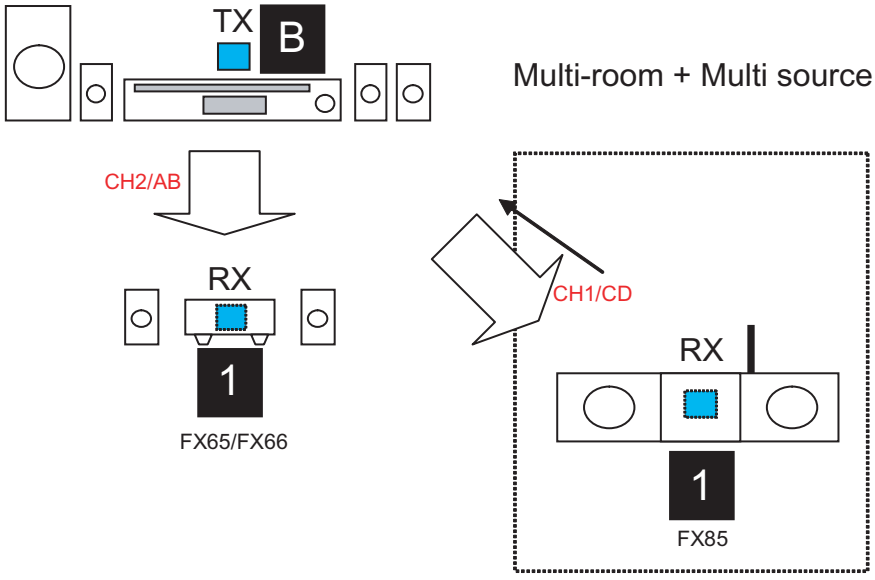
- This is the basic configuration of FX65/FX66 whereby it is only receiving wireless surround audio signal from the main set. This uses a Type A transmitter which is only able to send audio in one direction. Audio is sent using streams AB through Ch 2.



Case 2 A: FX65/FX66 + FX85

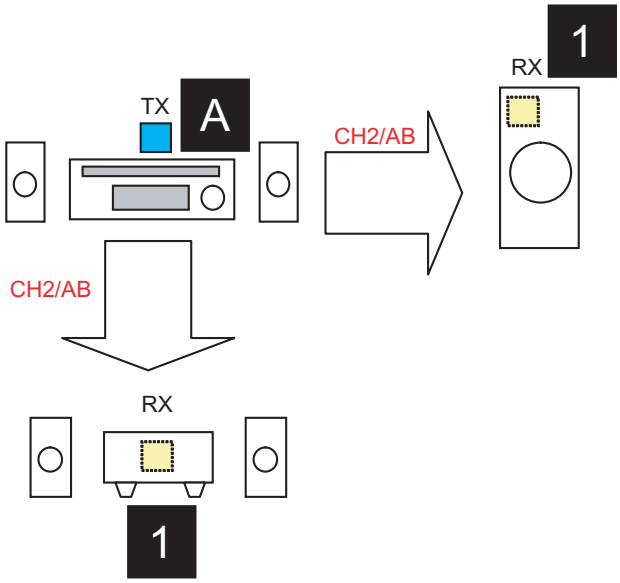
- In this configuration, a second receiver, an FX85, in another room is listening to another audio source from the main set. The FX85 also is able to send command to the main set such as Play, Stop, Skip, and Preset Tuner Channel Up/Down. This configuration uses Type B transmitter which is an upgrade of the Type A and can be used on Type 1 (FX65/FX66). This transmitter is able to send audio signal for second room via Ch 1 and first room via Ch 2.

  In this configuration, streams AB is used to transmit the audio from main unit to the first room Type 1 receiver (FX65/FX66) via Ch 2. While the second room audio is transmitted through stream CD via Ch 1.



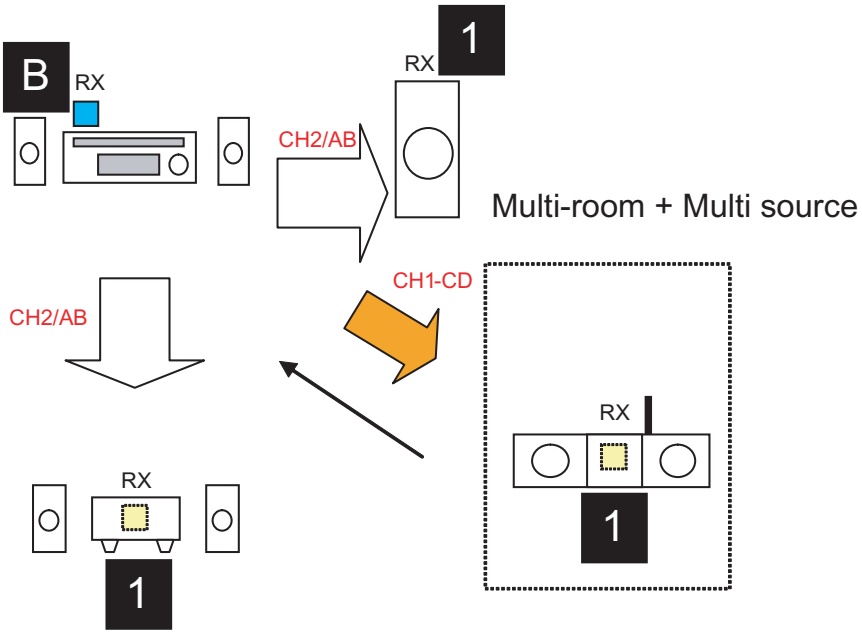
Case 3 A: Wireless Subwoofer

- This configuration, Type A transmitter send signals to subwoofer and Type 1 receiver (FX65/FX66) via channel 2, which is the same audio signals sent to FX65/FX66 as well. The subwoofer only decodes the low frequency signal.

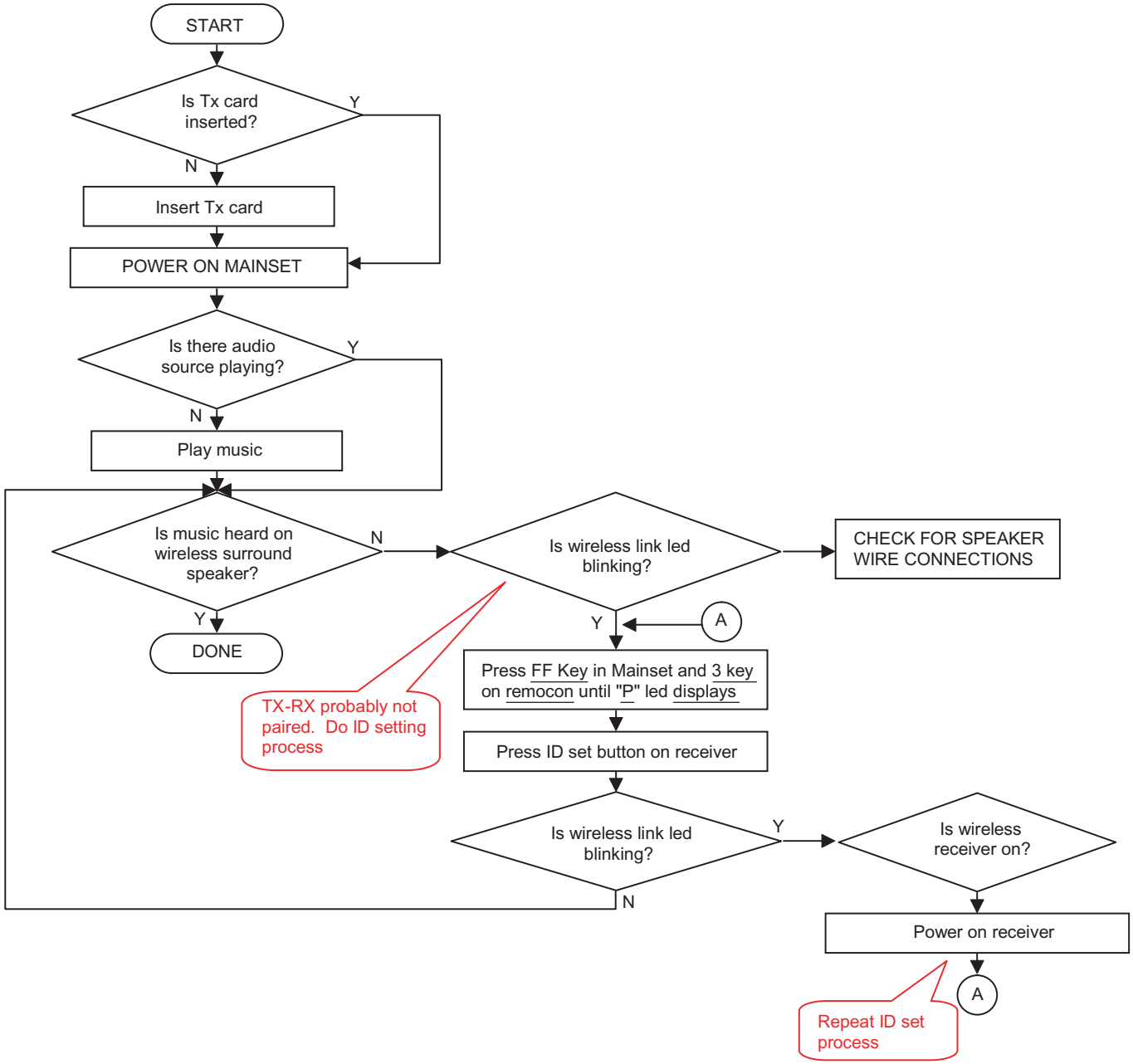


Case 3 B: FX65/FX66 + FX85 + Wireless Subwoofer (for PTX7, PT1050)

- In this configuration, all audio source for the Type 1 subwoofer and Type 1 first room receiver (FX65/FX66) through streams AB via Ch 2 and Type 2 second room receiver (FX85) comes from transmitter B through streams CD via Ch 1. For this configuration, the user must perform ID setting for FX85 if it is sold as an accessory, but for bundled type, it already is paired with the transmitter.



8.2.7. User Operation Flow



8.2.8. Baseband Settings Update from EEPROM IC

· The software will read from an external EEPROM IC to get the selected baseband IC settings. Not all baseband register settings (a total of 512 bytes) will be read from the EEPROM IC, though. Aside from getting the baseband settings from the EEPROM IC, it is also used to enable FCC testing, select the application type and entering into doctor mode (this can be enabled also by sending a command via the main unit).

8.2.9. Doctor Mode

· For normal operation but automatic frequency selection is disabled, it can enter into Doctor Mode. This feature is hidden from normal user and will be used by the service center to fix to a particular RF Channel. With doctor mode, the user can disable frequency automatic allocation and sniffer and be able to select a fix RF Channel (Channels 1, 2 or 3) by a combination or remote control keys. Refer to Section 9.4 for Wireless Doctor Mode.

9 Self-Diagnosis and Special Mode Setting

9.1. Service Mode Summary Table

The service modes can be activated by pressing various button combination on the main unit and remote control unit.

Below is the summary for the various modes for checking:

Player buttons	Remote control unit buttons	Application	Note
STOP	0	Error code check.	(Refer to the section "9.2.1. Service Mode Table 1" for more information.)
	5	Jitter checking.	
	PAUSE	Initial setting of laser drive current.	
	FUNCTIONS	DVD laser drive current check.	(Refer to the section "9.2.2. Service Mode Table 2" for more information.)
	1	ADSC internal RAM data check.	
	3	CD laser drive current check.	
	6	Region display and mode.	(Refer to the section "9.2.3. Service Mode Table 3" for more information.)
	7	Micro-processor firmware version check.	
	≧10	Initialization of the player (factory setting is restored). Used after replacement of Micro-processor (DV5 LSI) IC, FLASH ROM IC (IC8651), EEPROM IC (IC8611) and DVD Module P.C.B.	
	8	DVD Module P.C.B. firmware version check.	(Refer to the section "9.2.4. Service Mode Table 4" for more information.)
	MENU	Communication error display.	
	TOP MENU	ECC error check.	
	EQ	CPPM/CRM keys check.	
	ENTER	DVD Module P.C.B. reset.	
	▲	Timer 1 check.	(Refer to the section "9.2.5. Service Mode Table 5" for more information.)
	▼	Timer 1 reset.	
	▶	Timer 2 check.	
	◀	Timer 2 reset.	
STOP+ ▶▶|	1	Combination reliability test mode.	(Refer to the section "9.2.7.1. Test Mode List" for more information.)
	2	OPEN/CLOSE reliability test mode.	
	3	Tray rotation reliability test mode.	

Note:

An error code will be canceled if a power supply is turned OFF.

*1: CPPM is the copy guard function beforehand written in the disk for protection of copyrights.

*2: CEC is the consumer electronic control used for high-level user control of HDMI-connected devices.

*3: HDCP is the specification developed to control digital audio & video contents transmission for DVI or HDMI connections.

9.2. Service Mode Table (Main Unit)

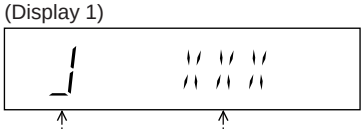
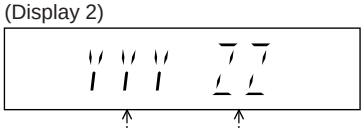
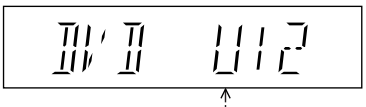
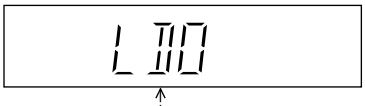
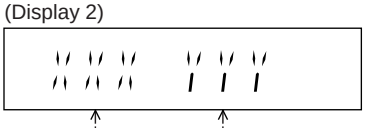
By pressing various button combinations on the main unit and remote control unit, you can activate the various service modes for checking.

Special Note:

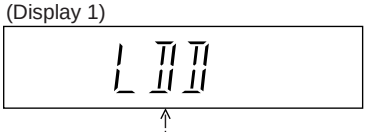
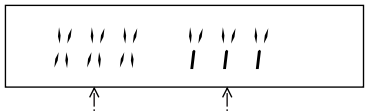
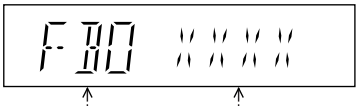
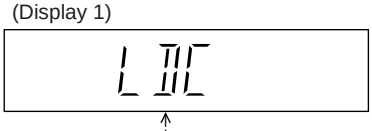
Due to the limitations of the no. characters that can be shown on the FL Display, the "FL Display" button on the remote control unit can be used to show the two display pages. (Display 1 / Display 2).

・Refer to Section 7.1 for the section on "Remote Control Key Buttons Operations".

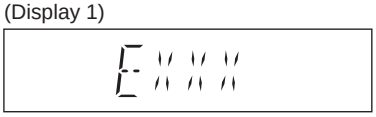
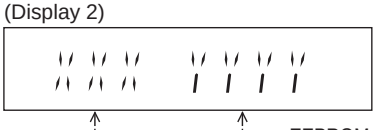
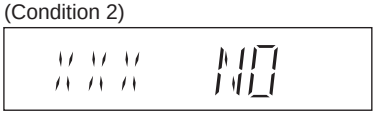
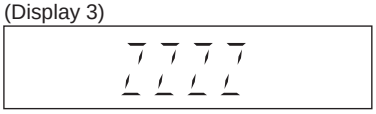
9.2.1. Service Mode Table 1

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Jitter check	Jitter check. Jitter rate is measured and displayed. Measurement is repeatedly done in the cycle of one second. Read error counter starts from zero upon mode setting. When target block data failed to be read out, the counter advances by one increment. When the failure is caused by minor error, it may be corrected when retried to enable successful reading. In this case, the counter advances by one. When the error persists even after retry, the counter may jump by two or more. FL Display sequence: Display 1➞2.	(Display 1)  Jitter check mode / Jitter rate Jitter rate is shown in decimal notation to one place of decimal. Focus drive value is shown in hexadecimal notation. (Display 2)  Lead Error Counter / Focus Drive Value	In STOP (no disc) mode, press [STOP] button on the main unit, and [5] button on the remote control unit. Press [POWER] button to exit. Press [FL Display] on remote control unit for next page (FL Display).
Error code check	Error code check The latest error code stored in the EEPROM IC is displayed. Note: Refer to "Section 9.5 DVD Self Diagnostic Function-Error Code" for more detailed information on the error codes.	 U / H / F Error code (play_err) is expressed in the following convention. Error code = 0 x DAXX is expressed: ➞ DVDnn U12 Error code = 0 x DBXX is expressed: ➞ DVDnn H12 Error code = 0 x DXXX is expressed: ➞ DVDnn F123 Error code = 0 x 0000 is expressed: ➞ DVDnn F--- * "xx" denotes the error code	In STOP (no disc) mode, press [STOP] button on the main unit, and [0] button on the remote control unit. * With pointing of cursor up and down on display. Cancelled automatically 5 seconds later. To exit, press [POWER] button on main unit or remote control.
Initial setting of laser drive current	Initial setting of laser drive current. Initial current value for the DVD laser and CD laser is separately saved in the EEPROM IC. FL Display sequence: Display 1➞2.	(Display 1)  Laser current measurement mode The value denotes the current in decimal notation. (Display 2)  CD Laser / DVD Laser The above example shows the initial current is XXXmA and YYYmA for CD laser and DVD laser respectively when the laser is switched on.	In STOP (no disc) mode, press [STOP] button on the main unit, and [PAUSE] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] on remote control unit for next page (FL Display) on values of laser drive current.

9.2.2. Service Mode Table 2

Item		FL Display	Key Operation
Mode Name	Description		Front Key
DVD laser drive current measurement	DVD laser drive current measurement. DVD laser drive current is measured and the result is displayed together with the initial value stored in the EEPROM IC. After the measurement, DVD laser emission is kept on. It is turned off when POWER key is switched off. FL Display sequence: Display 1→2.	(Display 1)  DVD laser current measurement mode The value denotes the current in decimal notation. (Display 2)  DVD Laser Initial Value DVD Laser Value The above example shows the initial current is XXXmA and the measured value is YYYmA.	In STOP (no disc) mode, press [STOP] button on the main unit, and [FUNCTIONS] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] on remote control unit for next page (FL Display) on values of dvd drive current.
ADSC internal RAM data check	ADSC internal RAM data check. ADSC internal RAM data is read out and displayed.	 Address RAM data for specified address The value is shown in hexadecimal notation. The above example shows the data in ADSC address FBOh is XXXXh.	In STOP (no disc) mode, press [STOP] button on the main unit, and [1] button on the remote To exit, press [POWER] button.
CD laser drive current measurement	CD laser drive current measurement. CD laser drive current is measured and the result is displayed together with the initial value stored in the EEPROM IC. After the measurement, CD laser emission is kept on. It is turned off when POWER key is switched off. FL Display sequence: Display 1→2.	(Display 1)  CD laser current measurement mode The value denotes the current in decimal notation. (Display 2) CD laser initial value CD laser value The above example shows the initial current is 0XXmA and the measured value is 0YYmA.	In STOP (no disc) mode, press [STOP] button on the main unit, and [3] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] on remote control unit for next page. (FL Display)

9.2.3. Service Mode Table 3

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Micro-processor firmware version display & EEPROM checksum display.	Micro-processor firmware version display & EEPROM checksum display. EEPROM checksum is only available due to existence of EEPROM IC. Note: Condition 1/2/3 shows the state of EEPROM IC. It is indicated in Display 2. FL Display sequence: Display 1➞2➞3.	(Display 1)  (Display 2)  (Condition1) If the version of the EEPROM does not match, [NG] is displayed. (Condition 2)  (a) If there is NO EEPROM header string OR (b) If there is no EEPROM (no data is received by Micro-processor), [NO] is displayed. (Condition 3) If the EEPROM version matches, checksum [YYYY] is displayed. (Display 3) 	In STOP (no disc) mode, press [STOP] button on the main unit, and [7] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] button on remote control unit for next page. (FL Display)
Initialization	Initialization. User settings are cancelled and player is initialized to factory setting. It is necessary when after replacement of Micro-processor (DV5 LSI) IC, FLASH ROM IC (IC8651), EEPROM IC (IC8611) & DVD Module P.C.B.		In STOP (no disc) mode, press [STOP] button on the main unit, and [≧10] button on the remote control unit. Cancelled automatically 5 seconds later.
Region display	Region code display, TV broadcasting system & the model no. information. Note: Refer to Figure 2 for "Video Design Information".	 	In STOP (no disc) mode, press [STOP] button on the main unit, and [6] button on the remote control unit. Cancelled automatically 5 seconds later.

Model Series	Country Region	Region Code	TV Broadcasting System	Product		
				Signal System (Default)	Region Display (Default)	OSD Menu Language
P, PC, PX	USA, Canada, PX	1	NTSC	NTSC (*A)	1PN	English, Spanish, Canadian French
(S)	Japan	2	NTSC	NTSC (*A)	2PN	Japanese, English
E	Europe	2	PAL	PAL (*C)	2P6	English, French, German, Spanish, Polish, Russian, Czech, Hungarian
EB, EG	Europe	2	PAL	PAL (*C)	2P6	English, French, German, Italian, Spanish, Polish, Swedish, Dutch
GC, GS	Middle East	2	PAL	PAL (*C)	2P6	English, French, German, Spanish, Polish, Russian, Czech, Hungarian
GCS, GD, GT, GCT	South East Asia, Korea, Taiwan	3	PAL NTSC	NTSC (*B)	3PN	English, Traditional Chinese
GN	New Zealand, Australia	4	PAL	PAL (*C)	4P6	English, French, German, Italian, Spanish, Polish, Swedish, Dutch
PL, GCP, LB	Central/South/ Latin America	4	NTSC	NTSC (*D)	4PN	English, Spanish, French, Brazilian Portuguese
EE	CIS	5	SECAM	PAL (*C)	5P6	English, French, German, Spanish, Polish, Russian, Czech, Hungarian
GK	China	6	PAL	NTSC (*B)	6PN	English, Simplified Chinese

NTSC (*A)

Source	Output
Screen Saver	NTSC
NTSC disc	NTSC
PAL disc	PAL (DVD-V)
	NTSC (DVD-A/VCD)

NTSC (*B)

Source	Output
Screen Saver	NTSC
NTSC disc	NTSC (default)
	PAL60
PAL disc	PAL60

PAL (*C)

Source	Output
Screen Saver	PAL
NTSC disc	PAL60 (default)
	NTSC
PAL disc	PAL

NTSC (*D)

Source	Output
Screen Saver	NTSC
NTSC disc	NTSC
PAL disc	NTSC

Explanation of Display

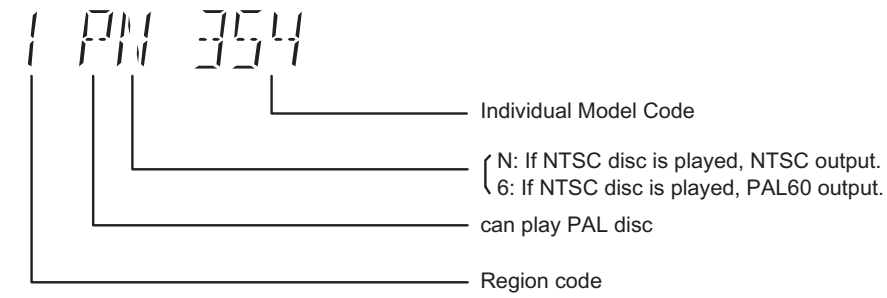
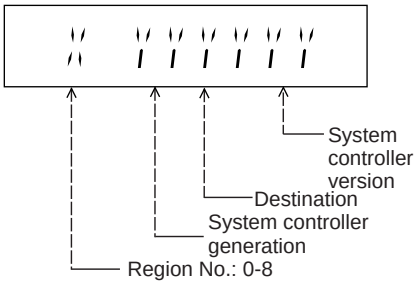
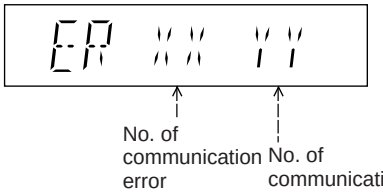
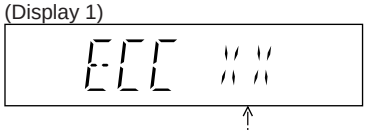
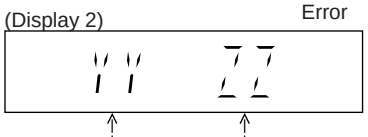
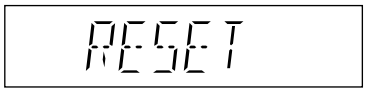
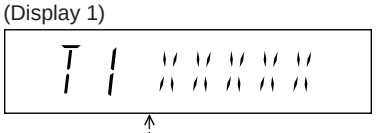
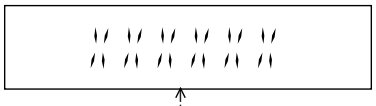

1 PN 3G4
Individual Model Code
N: If NTSC disc is played, NTSC output.
6: If NTSC disc is played, PAL60 output.
can play PAL disc
Region code

Figure 2 Video Design Information

9.2.4. Service Mode Table 4

Mode Name	Item Description	FL Display	Key Operation Front Key
DVD Module P.C.B. firmware version display	DVD Module P.C.B. firmware version is displayed on the FL Display. The firmware version can be updated using recovery disc. Note: It is necessary to check for firmware version before carrying out the version up using the disc.		In STOP (no disc) mode, press [STOP] button on the main unit, and [8] button on the remote control unit. Cancelled automatically 5 seconds later.
Communication error display	Displays frequency of communication errors between system control IC and mechanism control IC in the DVD Module P.C.B.		In STOP (no disc) mode, press [STOP] button on the main unit, and [MENU] button on the remote control unit. Cancelled automatically 5 seconds later.
ECC Error Check	ECC refers to Error Correction Code. It describes the error correction code that was carried out for the decoding of audio & video. FL Display sequence: Display 1→2.	(Display 1)  ECC Lead Error (Display 2) 	In STOP (no disc) mode, press [STOP] button on the main unit, and [TOP MENU] button on the remote control unit. Press [POWER] button to exit. Press [FL Display] on remote control unit for next page (FL Display).
CPPM/CRM Keys Check	CPPM/CRM refers to the Content Protection for Recordable Media and Pre-Recorded Media. It displays the existence of the keys as "1" or "0". OK: Existing of keys. NG: Non existing of keys.		In STOP (no disc) mode, press [STOP] button on the main unit, and [EQ] button on the remote control unit. Cancelled automatically 5 seconds later.
DVD Module P.C.B. Reset	To reset DVD Module P.C.B. This process is used when the DVD Module P.C.B. or FLASH ROM IC is replaced with a new one.		While in initialization mode, press & hold [STOP] button on the main unit, follow by [ENTER] button on the remote control unit. Cancelled automatically 5 seconds later.

9.2.5. Service Mode Table 5

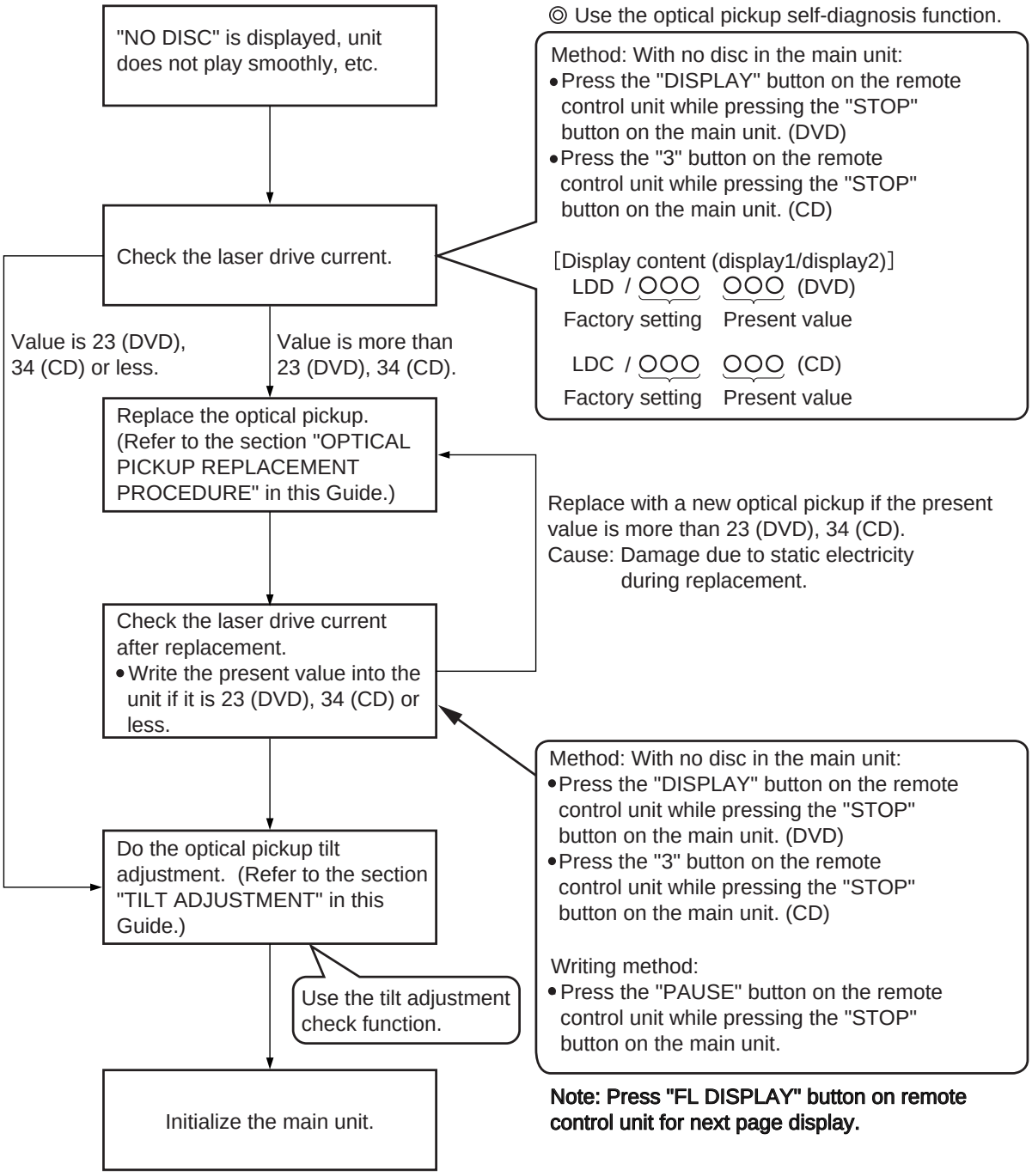
Mode Name	Item Description	FL Display	Key Operation Front Key
Timer 1 check	Timer 1 check Laser operation timer is measured separately for DVD laser and CD laser. FL Display sequence: Display 1→2.	(Display 1)  DVD laser usage time Shown to the above is DVD laser usage time, and to the below is CD laser usage time. Time is shown in 5 digits of decimal notation in a unit of 10 hours. "00000" will follow "99999". (DVD laser) (Display 2)  CD laser usage time Time is shown in 6 digits of decimal notation in a unit of 10 hours. "000000" will follow "999999". (CD laser)	In STOP (no disc) mode, press [STOP] button on the main unit, and [▲] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] button for next page of FL Display.
Timer 1 reset	Timer 1 reset Laser operation timer of both DVD laser and CD laser is reset all at once.	 Time is shown in 5 digits of decimal notation in a unit of 10 hours. It will clear to "00000" upon reset.	While displaying Timer 1 data, press [STOP] button on the main unit, and [▼] button on the remote control unit. Cancelled automatically 5 seconds later
Timer 2 check	Timer 2 check Spindle motor operation timer	 Time is shown in 5 digits of decimal notation in a unit of 1 hour. "00000" will follow "99999".	In STOP (no disc) mode, press [STOP] button on the main unit, and [▶] button on the remote control unit. Cancelled automatically 5 seconds later.
Timer 2 reset	Timer 2 reset Spindle motor operation timer	 Time is shown in 5 digits of decimal notation in a unit of 1 hour. It will be cleared to "00000" upon activating this.	While displaying Timer 2 data, press [STOP] button on the main unit, and [◀] button on the remote control unit. Cancelled automatically 5 seconds later.

9.2.6. Optical Pick-up Self-Diagnosis

The optical pickup self-diagnosis function and tilt adjustment check function have been included in this unit. When repairing, use the following procedure for effective self-diagnosis and tilt adjustment. Be sure to use the self-diagnosis function before replacing the optical pickup when "NO DISC" is displayed. As a guideline, you should replace the optical pickup when the value of the laser drive current is more than the specified value.

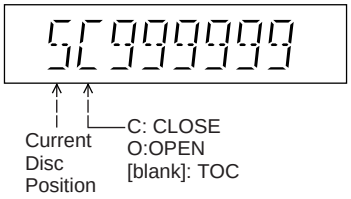
Note:

Press the power button to turn on the power, and check the value within three minutes before the unit warms up. (Otherwise, the result will be incorrect.)

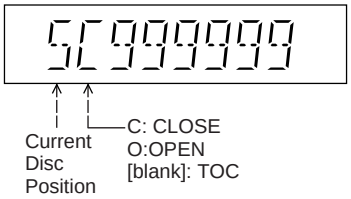

"NO DISC" is displayed, unit does not play smoothly, etc.
Check the laser drive current.
Value is 23 (DVD), 34 (CD) or less.
Value is more than 23 (DVD), 34 (CD).
Replace the optical pickup. (Refer to the section "OPTICAL PICKUP REPLACEMENT PROCEDURE" in this Guide.)
Check the laser drive current after replacement.
• Write the present value into the unit if it is 23 (DVD), 34 (CD) or less.
Do the optical pickup tilt adjustment. (Refer to the section "TILT ADJUSTMENT" in this Guide.)
Use the tilt adjustment check function.
Initialize the main unit.
◎ Use the optical pickup self-diagnosis function.
Method: With no disc in the main unit:
• Press the "DISPLAY" button on the remote control unit while pressing the "STOP" button on the main unit. (DVD)
• Press the "3" button on the remote control unit while pressing the "STOP" button on the main unit. (CD)
[Display content (display1/display2)]
LDD / ○○○ ○○○ (DVD)
Factory setting Present value
LDC / ○○○ ○○○ (CD)
Factory setting Present value
Replace with a new optical pickup if the present value is more than 23 (DVD), 34 (CD).
Cause: Damage due to static electricity during replacement.
Method: With no disc in the main unit:
• Press the "DISPLAY" button on the remote control unit while pressing the "STOP" button on the main unit. (DVD)
• Press the "3" button on the remote control unit while pressing the "STOP" button on the main unit. (CD)
Writing method:
• Press the "PAUSE" button on the remote control unit while pressing the "STOP" button on the main unit.
Note: Press "FL DISPLAY" button on remote control unit for next page display.

9.2.7. Reliability Test Mode (RC1 Mechanism)

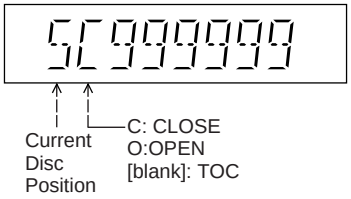
9.2.7.1. Test Mode List

<table>
<tr><th colspan="2">Item</th><th rowspan="2">FL Display</th><th>Key Operation</th></tr>
<tr><th>Mode Name</th><th>Description</th><th>Front Key</th></tr>
<tr><td>Combination reliability</td><td>The operation of the RC1 mechanism is carried out for the tray open/close, tray rotation, and the TOC.
Below is the flow sequence:-
It is a PLAY position about DISC1. - >
Tray OPEN(DISC1,5) ->
Tray CLOSE ->
DISC1 TocRead ->
Tray OPEN ->
Tray CLOSE ->
DOWN ->
Tray Turn (The opposite direction 2 section)->
DISC4 TocRead ->
DOWN ->
Tray Turn (The right direction 1 section) ->
DISC5 TocRead ->
DOWN ->
Tray Turn (The right direction 2 section) ->
DISC2 TocRead ->
DOWN ->
Tray Turn (The right direction 1 section) ->
DISC3 TocRead ->
DOWN ->
Tray Turn (The opposite direction 2 section)->
DISC1 -> From the beginning</td><td> 

The number of times of a test is displayed on the FL Display of main unit with the number of 10.
The maximum display: 999999
A counter will be reset if secondary power -off is carried out.</td><td>In STOP mode, press & hold [STOP] button with [▶▶I] button on the main unit, followed by [1] button on the remote control unit.

To exit, press [POWER] button on the main unit or remote control unit.</td></tr>
<tr><td>OPEN/ CLOSE reliability</td><td>The operation of the RC1 mechanism is carried out for the tray open/close.
Below is the flow sequence:-
It is a PLAY position about DISC1. - >
Tray OPEN(DISC3,4) ->
Tray CLOSE ->
DISC2 TOCRead ->
DOWN ->
Tray OPEN(DISC4,5) ->
Tray CLOSE ->
DISC3 TocRead ->
DOWN ->
Tray OPEN(DISC5,1) ->
Tray CLOSE ->
DISC4 TocRead ->
DOWN ->
Tray OPEN(DISC1,2) ->
Tray CLOSE ->
DISC5 TocRead ->
DOWN ->
Tray OPEN(DISC2,3) ->
Tray CLOSE ->
DISC1 TocRead ->
DOWN ->From the beginning</td><td> 

The number of times of a test is displayed on the FL Display of main unit with the number of 10.
The maximum display: 999999
A counter will be reset if secondary power -off is carried out.</td><td>In STOP mode, press & hold [STOP] button with [▶▶I] button on the main unit, followed by [2] button on the remote control unit.

To exit, press [POWER] button on the main unit or remote control unit.</td></tr>
<tr><td>Tray rotation reliability</td><td>The operation of the RC1 mechanism is carried out for the tray rotation & the TOC.
Below is the flow sequence:-
DISC1, Play Position ->
DISC1 TocRead ->
DOWN ->
DISC2, Play Position ->
DISC2 TocRead ->
DOWN ->
DISC3, Play Position ->
DISC3 TocRead ->
DOWN ->
DISC4, Play Position ->
DISC4 TocRead ->
DOWN ->
DISC5, Play Position ->
DISC5 TocRead ->
DOWN -> From the beginning</td><td> 

The number of times of a test is displayed on the FL Display of main unit with the number of 10.
The maximum display: 999999
A counter will be reset if secondary power -off is carried out.</td><td>In STOP mode, press & hold [STOP] button with [▶▶I] button on the main unit, followed by [3] button on the remote control unit.

To exit, press [POWER] button on the main unit or remote control unit.</td></tr>
</table>

9.2.7.2. Error Code Table Display

- The mechanism unit is equipped with fail-safe protection for the “OPEN/CLOSE”, “TURN” & “UP/DOWN” operations. When it detects any abnormalities, the fail-safe protection will be performed with an error code being memorized & the power supply “OFF” will be carried out.
- Below is the error code display:-

Mecha operation	The kind of error	FL Display
OPEN/ CLOSE	The OPEN error under clamp rise	H01 0
	The OPEN error under clamp down	H01 1
	The CLOSE error under clamp rise	H01 2
	The CLOSE error under clamp down	H01 3
UP/ DOWN	UP error	H01 4
	DOWN error	H01 5
TURN	Right rotation error	H01 6
	Reverse rotation error	H01 7
TOC READ	TOC READ error	H01 8
FOCUS	Timeout error	H01 9
TURN	The right rotation direction stop position error	H01 10
	The reverse rotation direction stop position error	H01 11

9.3. Wireless Service Mode Summary Table

The service modes can be activated by pressing various button combination on the player and remote control unit.

Below is the summary of major checking:

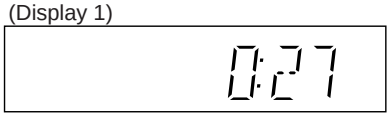
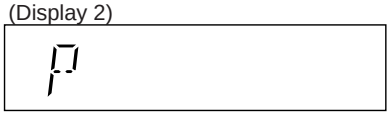
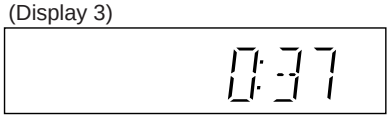
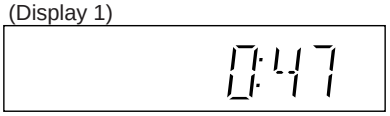
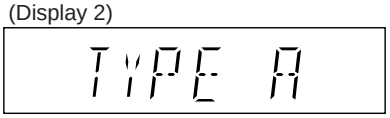
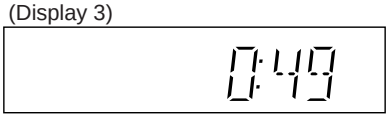
Player buttons	Remote control unit buttons	Application	Note
FAST FORWARD	3	ID setting	(Refer to the section "9.4.1. Service Mode Table 1" for more information).
	SECOND SELECTOR (press & hold)	Active transmitter display	
STOP (only in AUX)	4	RF channel 1 display	(Refer to the section "9.4.2. Service Mode Table 2" for more information).
	5	RF channel 2 display	
	6	RF channel 3 display	
	7	Auto RF channel display	

Note: Main room refers to the location of the main unit.

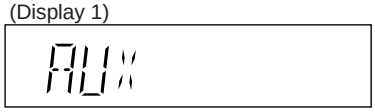
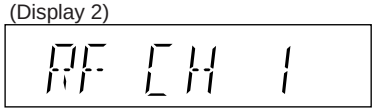
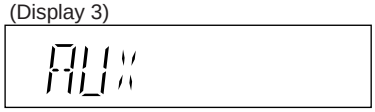
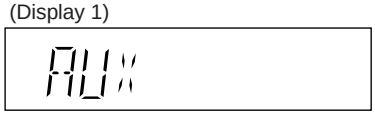
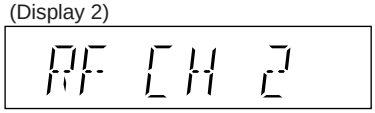
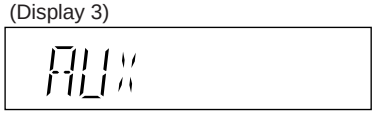
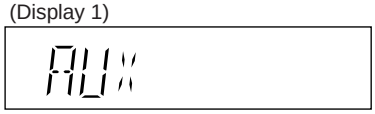
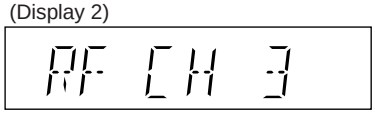
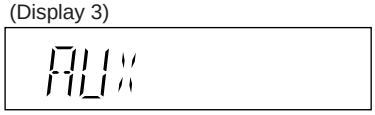
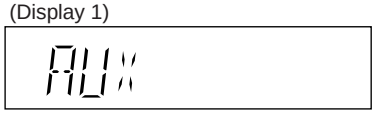
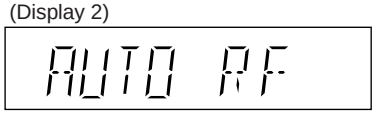
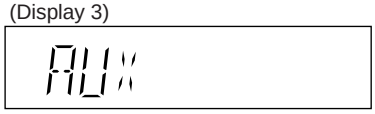
9.4. Service Mode Table (Wireless)

By pressing various button combinations on the player and remote control unit, you can activate the various service modes for checking.

9.4.1. Service Mode Table 1

Item		FL Display	Key Operation
Mode Name	Description		Front Key
ID Setting	To set the ID in the Tx & Rx. The system goes into "Pairing Mode". [P] will be displayed for 60 seconds to indicate it is in "Pairing Mode". During this condition, the "ID set" button on the receiver unit can be pressed to pair the Tx & Rx. After 60 seconds, the FL display will return to its previous display. FL Display sequence: Display 1→2→3. Note: Carry out pairing when Tx or Rx has been changed.	(Display 1)  (Display 2)  (Display 3) 	Main room is in CD/DVD mode. Press and hold [FAST FORWARD] button on the main unit, and [3] button on the remote control unit. After 10 seconds. To cancel, press the same buttons.
Active Transmitter Type Display	To check the type of transmitter inserted into the main unit. There are two types of transmitter card. (Type A & Type B). Type A: FX65/FX66/Wireless Active Woofer Type B: FX85 (For multiroom features) In normal condition,with transmitter operating properly and slotted in the main unit, it shows on FL Display in Condition 1. FL Display sequence: Display 1→2→3.	(Condition 1 - Transmitter is Type A) (Display 1)  (Display 2)  (Display 3) 	Main room is in CD/DVD mode. Press and hold [SECOND SELECTOR] button on the remote control unit. After 2 seconds.

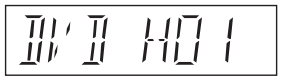
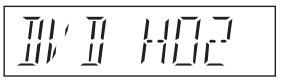
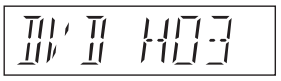
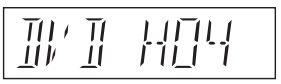
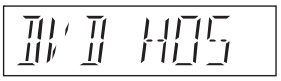
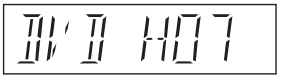
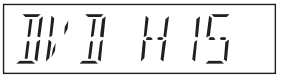
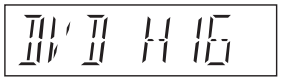
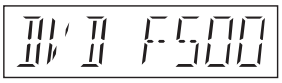
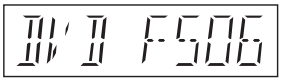
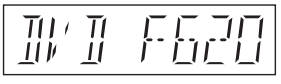
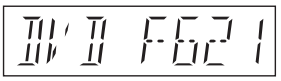
9.4.2. Service Mode Table 2

Item		FL Display	Key Operation
Mode Name	Description		Front Key
RF Channel Selection Display	RF Channel 1 Display* FL Display sequence: Display 1→2→3	(Display 1)  (Display 2)  (Display 3) 	Main room is in AUX mode. Press and hold [STOP] button on the main unit, and [4] button on the remote control unit. After 2 seconds.
	RF Channel 2 Display* FL Display sequence: Display 1→2→3	(Display 1)  (Display 2)  (Display 3) 	Main room is in AUX mode. Press and hold [STOP] button on the main unit, and [5] button on the remote control unit. After 2 seconds.
	RF Channel 3 Display* FL Display sequence: Display 1→2→3	(Display 1)  (Display 2)  (Display 3) 	Main room is in AUX mode. Press and hold [STOP] button on the main unit, and [6] button on the remote control unit. After 2 seconds.
	Auto RF Channel Display* FL Display sequence: Display 1→2→3	(Display 1)  (Display 2)  (Display 3) 	Main room is in AUX mode. Press and hold [STOP] button on the main unit, and [7] button on the remote control unit. After 2 seconds.

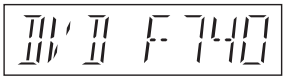
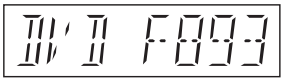
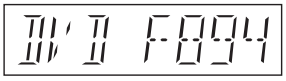
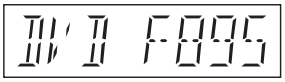
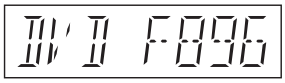
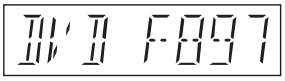
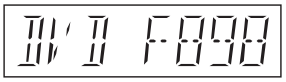
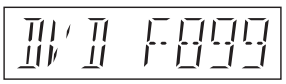
***Note: This mode is for purpose of disabling/enabling the frequency of automatic allocation and be able to select a fixed RF channel (channels 1, 2 or 3).**

9.5. DVD Self Diagnostic Function-Error Code

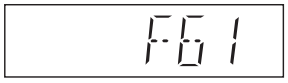
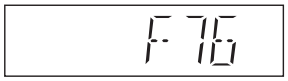
9.5.1. Mechanism Error Code Table

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
H01	Tray loading error	The tray opening and closing is abnormal. CLOSE and OPEN of the tray cannot be carried out properly. Loading motor error, DV5 LSI IC (IC8001) error.		Press [■ STOP] on main unit for next error. (OPEN time: OPEN→ CLOSE→OPEN→ H01 at CLOSE: CLOSE →OPEN→CLOSE → H01)
H02	Spindle servo error	The spindle servo/motor is abnormal. The FG pulse is abnormal. CLV servo error.		Press [■ STOP] on main unit for next error.
H03	Traverse servo error	The traverse is abnormal. (Traverse servo, DV5 LSI IC (IC8001), TRV motor error.)		Press [■ STOP] on main unit for next error.
H04	Tracking servo error	Tracking coil NG (OPU unit abnormal), DV5 LSI IC (IC8001) error.		Press [■ STOP] on main unit for next error.
H05	Seek time out error	It is not possible to access the disc. TOC cannot read. Abnormal disc etc. Pickup abnormal or disk is dirty. (TRV motor error, DV5 LSI IC (IC8001) error.)		Press [■ STOP] on main unit for next error.
H07	Driver IC thermal shut down	The spindle motor is abnormal. (short between brushes)		Press [■ STOP] on main unit for next error.
H15	Disc tray open detection switch failure	The disc tray cannot be opened & it closes spontaneously.		Press [■ STOP] on main unit for next error.
H16	Disc tray close detection switch failure	The disc tray cannot be closed & it opens spontaneously.		Press [■ STOP] on main unit for next error.
U11	Focus servo error	Focus coil, FE signal error.		Press [■ STOP] on main unit for next error. (Unfinalized DVD-R is likely to beocme U11.)
U15	Unfinalized DVD-R			
F500	DSC error	DV5 LSI IC (IC8001) stops in the occurance of servo error (startup, focus error, etc)		Press [■ STOP] on main unit for next error.
F506	Invalid media	Disc is flipped over, TOC unreadable, incompatible disc.		Press [■ STOP] on main unit for next error.
F620	OPU unit abnormality temperature	Laser protection at high temperature.		Press [■ STOP] on main unit for next error.
F621	OPU unit circuitry temperature	Laser protection at circuit failure.		Press [■ STOP] on main unit for next error.

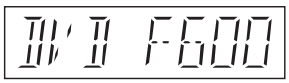
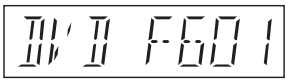
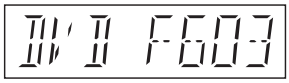
9.5.2. DVD Module Error Code Table

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
U702	HDMI/DVI I2C communication error	The communication error of I2C when connecting it with HDMI/ DVI. For instance, when EDID information to which information on the TV set side has been described cannot be read, it is generated.		Press [■ STOP] on main unit for next error.
U703	HDMI/DVI attestation error	When attestation (HDCP) with the TV side fails when connecting it with HDMI/DVI, it is generated.		Press [■ STOP] on main unit for next error.
U704	HDMI/DVI SRM Riborcerar	It is generated at the equipment to which the TV set is Riborced when connecting it with HDMI/DVI.		Press [■ STOP] on main unit for next error.
U705	HDMI/DVI SRM disk falsification check error	It is generated at the time of it is time when illegal the SRM data of the reproducing disk (verify error), when connecting it with HDMI/DVI.		Press [■ STOP] on main unit for next error.
F740	HDMI device key	I2C error when writing HDMI Key device into transmitter.		Press [■ STOP] on main unit for next error.
F893	FLASH ROM IC data falsification error	Firmware error, DV5 LSI IC (IC8651) error.		Press [■ STOP] on main unit for next error.
F894	EEPROM IC abnormality error	When failing in the access to EEPROM IC located in the DVD (HDMI) Module P.C.B. (IC8611)		Press [■ STOP] on main unit for next error.
F895	Language area abnormal	Firmware version agreement check for factory preset setting failure prevention.		Press [■ STOP] on main unit for next error.
F896	No existence model	Firmware version agreement check for factory preset setting failure prevention.		Press [■ STOP] on main unit for next error.
F897	Initialization error	Incomplete initialization after writing of new firmware (Factory preset setting failure prevention)		Press [■ STOP] on main unit for next error.
F898	Disagreement of hardware and software	Unsuitable combination of AV Decoder, SDRAM & FLASH ROM IC (firmware).		Press [■ STOP] on main unit for next error.
F899	The communication specification disagreement between micro-processor	Unsuitable combination of number of system com and panel com used. (Frimware)		Press [■ STOP] on main unit for next error.

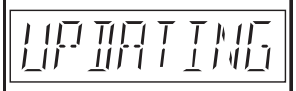
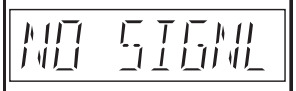
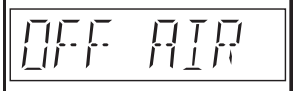
9.5.3. Power Supply Error Code Table

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F61	The abnormalities in an output or power supply circuit of POWER AMP	In normal operation, when DCDET2 goes to "L" (Low) (Not during POWER OFF condition), F61 appears on FL Display and PCONT goes to "L" (Low). This is due to speaker output has DC voltage or fan is not working.		Press [■ STOP] on main unit for next error.
F76	Abnormality in the output voltage of stabilized power supply	In normal operation when DCDET1 is detected "L" (Low) for two consecutive times, F76 is displayed on FL for 2 seconds and after that PCONT will be turned to "L" (Low). This is due to any of the DC voltages (+9V, +7V, -7V, +5V, +5.3V etc.) not available.		Press [■ STOP] on main unit for next error.

9.5.4. ECC Error Code Table

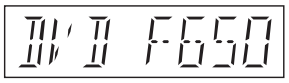
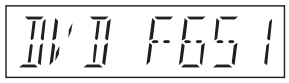
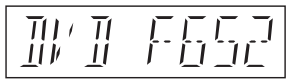
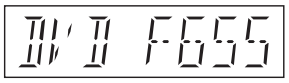
Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F600	Administrative information cannot be acquired by the recovery error.	It becomes impossible NaviPack etc. were done, and not to be able to acquire necessary information in the navigation's changing due to wound etc. of DISC, and to have done the reproduction transition.		Press [■ STOP] on main unit for next error.
F601	Irregular sector ID was demanded.	It tried to access the position that did not exist on DISC by the recording error etc. of authoring.		Press [■ STOP] on main unit for next error.
F603	KEYDET cannot be acquired by the recovery error.	The data for decoding copyright protection (CSS) cannot be acquired due to wound etc. of DISC, and it is not possible to reproduce.		Press [■ STOP] on main unit for next error.

9.5.5. XM Satellite Radio Code Table

Error Code	Diagnosis Contents	Description of Contents	Automatic FL Display	Remarks
XM RADIO	XM Radio Selection	It takes a short time for the XM radio to power up after selecting the sourceon the main unit. During this time, the FL display shows the message.Wait for a few seconds for the process to completeIf not, check on the XM antenna if it is connected or damaged.	(Flashing)	
ANTENNA	XM connectivity	The XM antenna is not properly connected or the antenna cable is damaged.	(Flashing)	For more information, refer to operating instruction manual for connection of antenna.
UPDATING	XM Encryption Code	1) The XM antenna is being updated with the latest encryption code. (Wait for few seconds for the updating to be completed.) 2) The selected XM channel has been blocked, or isno longer available with the subscription package.	 (Flashing)	
NO SIGNL	XM Signal receptivity	The XM Signal is too weak. Re-oriented the XM antenna for better reception.	 (Flashing)	For more information, refer to operating instruction manual for optimizing the signal reception.
OFF AIR	XM Channel Broadcasting	The selected XM channel is not currently broadcasting information.	 (Flashing)	For more information, refer to operating instruction manual for selection of the channels.
XM ---	XM Channel Broadcasting	The selected XM channel is not available. Selection of a different channel.	(Flashing)	For more information, refer to operating instruction manual for selection of the channels.
XM ERROR	XM Module Abnormality	The XM radio module is performing abnormally. Turn the main unit off and power on. The XM antenna may be defective.	(Flashing)	

Special Note: XM Satellite Radio ID is necessary for the activation of the XM Satellite Radio.

9.5.6. USB Error Code Table

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F650	USB device: Devices other than mass storage	Devices other than the mass storage class are connected.		Press [■ STOP] on main unit for next error.
F651	USB device: Non-Full Speed Device	The device that the transfer rate did not correspond to Full Speed was connected.		Press [■ STOP] on main unit for next error.
F652	USB device: Interface NG	The device in the interface (subclass) outside correspondence was connected. (correspondence interface) 001b: Reduced Block Commands (RBC) 010b: SFF-8020i. MMC-2 (ATAPI) 110b: SCSI transparent command set.		Press [■ STOP] on main unit for next error.
F655	USB device: Overcurrent detection	The overcurrent of 500mA or more was detected in VDD USB, and the USB device driver function was intercepted. (To intercept the current.)		Press [■ STOP] on main unit for next error.

9.6. Sales Demonstration Lock Function

This function prevents discs from being lost when the unit is used for sales demonstrations by disabling the disc eject function. "LOCKED" is displayed on the unit, and ordinary operation is disabled.

9.6.1. Setting

· Prohibiting removal of disc

1. Select the DVD/CD function.
2. At POWER ON condition, press and hold down the ■ button and the power button on the player for at least three seconds. (The message, "___LOCKED_" appears when the function is activated.)

Note:

OPEN/CLOSE ⏏ and DISC EXCHANGE buttons are invalid and the player displays "___LOCKED_" while the lock function mode is entered.

· Prohibiting operation of selector and disc

1. Select the DVD/CD function.
2. At POWER ON condition, press and hold down the ▶ button and the power button on the player for at least three seconds. (The message, "___LOCKED_" appears when the function is activated.)

Note:

The following buttons are invalid and the player displays "___LOCKED_" while the lock function mode is entered.

Player	⏏ , ■ , SELECTOR, ▶▶| / ▶▶ , |◀◀ / ◀◀ , DISC EXCHANGE, DISC SKIP, DISC1-DISC5
Remote controller unit	NUMERIC KEYS 0~9, ≧10 , ■ , ❚❚ , ▶▶| , |◀◀ , ▶▶ , ◀◀ , FUNCTIONS, REPEAT, SLEEP, TOP MENU, RETURN, FL DISPLAY, SETUP, CH SELECT, QUICK OSD, DISC, SELECT, MUTING, MENU & 2ND SELECT

9.6.2. Cancellation

The lock can be cancelled by the same procedure as used in setting. ("UNLOCKED" is displayed on cancellation. Disconnecting the power cable from power outlet does not cancel the lock.)

9.7. Service Precautions

9.7.1. Recovery after the DVD player is repaired

- When the FLASH ROM IC or DVD Module P.C.B. is replaced, carry out the recovery processing to optimize the drive.

  Playback the recovery disk to process the recovery automatically.
- Recovery disc (Product number: RFKZD03R005) [SPG]
- Performing recovery process
  1. Load the recovery disc RFKZD03R005 on to the player and run it.
  2. Recovery is performed automatically. When it is finished, a message appears on the screen.
  3. Remove the recovery disc.
  4. Turn off the power.
  5. Initialize the player.

9.7.2. Firmware version-up of the DVD player

- The firmware of the DVD player may be renewed to improve the quality including operability and playability to the substandard discs.processing to optimize the drive.

  The recovery disc has also firmware version-up.
- After version-up, recovery processing is executed automatically.
- Part number of the recovery disc for version-up will be noticed when it is supplied.
- Updating firmware
  1. Load the recovery disc on to the player and run it.
  2. Firmware version of the player is automatically checked. Appropriate message appears whenever necessary.
  3. Using remote controller´s cursor key, select whether version updating is to be done or not. (Selection of Yes/No)
  4. a. If Yes is selected, version updating is performed.
     b. If No is selected, only recovery is performed.
  5. a. When updating is finished, remove the disc according to the message appearing on the screen.
     b. Remove the disc according to the message appearing on the screen.
  6. Turn off the power.

Note:

If the AC power supply is shut out during version-up due to a power failure, the version-up is improperly carried out.

In such a case, replace the FLASH ROM IC and carry out the version-up again.

9.7.3. DVD Module P.C.B. Reset

- When after replacing FLASH ROM IC or DVD Module P.C.B., FL displays error code “ DVD F897”. This means the unit is not initialized properly and the following process needs to be carry out.
- Procedures:
  1. Press ≧10 on remote control while pressing “STOP” button on main unit. (To enter into initialization)
  2. FL display show “INIT”
  3. While still pressing “STOP” button on main unit, press “ENTER” on remote control. (To reset the unit)
  4. FL will display “RESET” before FL display will change to TOC reading again.
  5. Power off unit. Unplug the AC cord.
  6. Power on the unit. It should be no problem. If problem persist check on the DVD Module P.C.B. or FLASH ROM IC.

10 Assembling and Disassembling

“ATTENTION SERVICER”

Be careful when disassembling and servicing.

Some chassis components may have sharp edges.

Special Note:

1. **This section describes the disassembly procedures for all the major printed circuit boards and main components.**
2. **Before the disassembly process was carried out, do take special note that all safety precautions are to be carried out. (Ensure that no AC power supply is connected during disassembling.)**
3. **For assembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**
4. **The Switch Regulator IC may have high temperature after prolonged use.**
5. **Use caution when removing the top cabinet and avoid touching heat sinks located in the unit.**

CAUTION: HOT!!
PLEASE DO NOT
TOUCH THE HEAT SINK

6. **Select items from the following index when checks or replacement are required.**

- Disassembly of Top Cabinet
- Disassembly of Tray Lid Assembly
- Disassembly of Front Panel
- Disassembly of Panel & Key P.C.B.
- Disassembly of Tray Base Assembly
- Disassembly of Mechanism Base Assembly
- Disassembly of Rear Panel
- Disassembly of XM Module P.C.B.
- Disassembly of Wireless Adapter P.C.B.
- Disassembly of Tray P.C.B.
- Disassembly of D-Amp P.C.B.
- Disassembly of Digital Amp IC (IC5000)
- Disassembly of DVD Module P.C.B.
- Disassembly of Main P.C.B.
- Disassembly of Regulator IC (IC2903)
- Disassembly of SMPS & AC-Inlet P.C.B.
- Disassembly of D-Port P.C.B.
- Disassembly of Switch Regulator IC (IC5701)
- Disassembly of Regulator Diode (D5803)
- Disassembly of Regulator Diodes (D5801 & D5802)
- Disassembly of Regulator Diode (D5702)
- Disassembly of Tray Guide (L) & Tray Guide (R)
- Disassembly of Rotary Tray
- Disassembly of Open Lock Gear
- Disassembly of Close Lock Gear
- Disassembly of Tray Motor P.C.B.
- Disassembly of Sensor P.C.B.
- Disassembly of Traverse Unit
- Disassembly of Pulley Gear
- Disassembly of Loading Motor P.C.B.

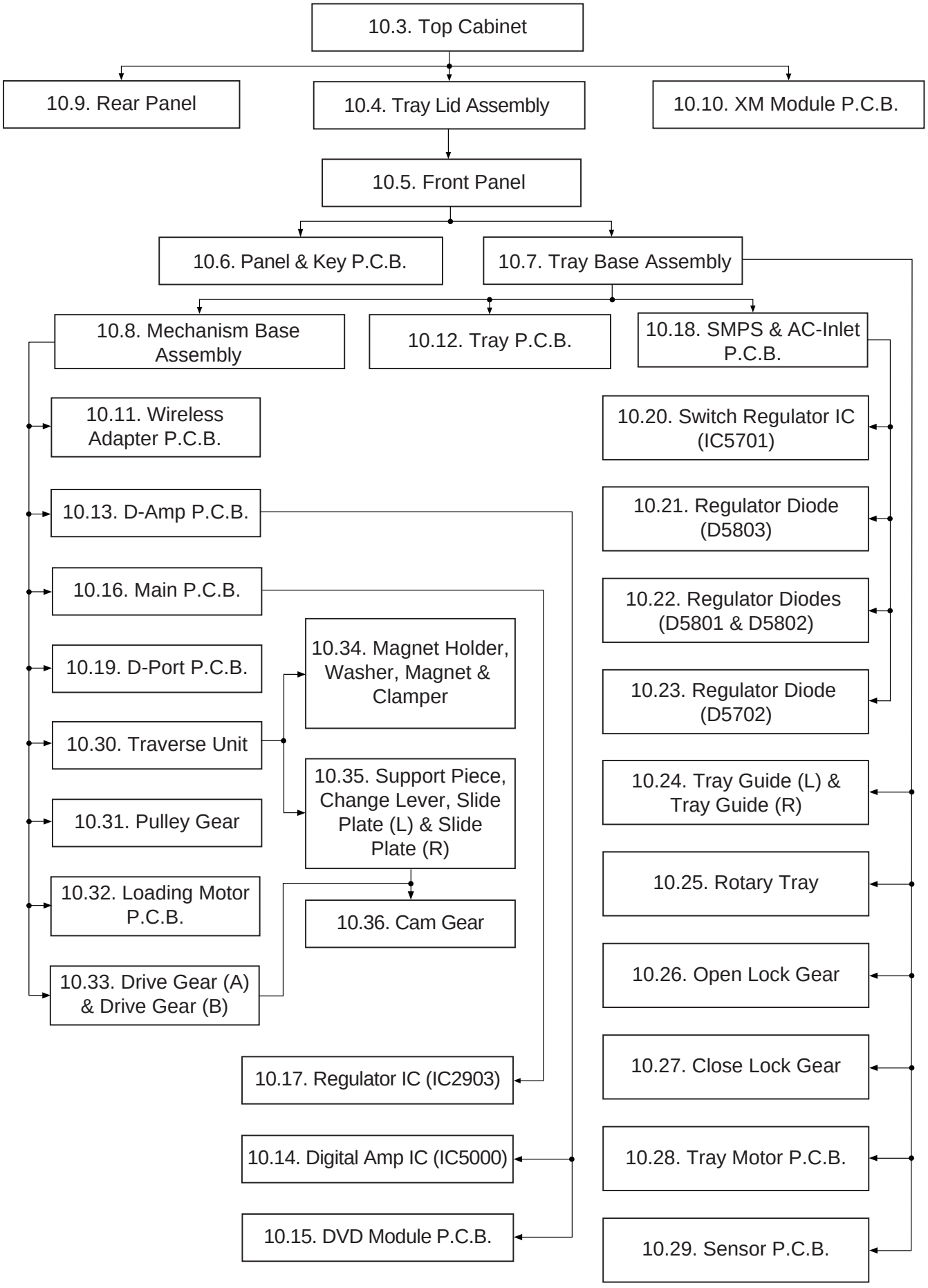
- Disassembly of Drive Gear (A) & Drive Gear (B)
- Disassembly of Magnet Holder, Washer, Magnet & Clamper
- Disassembly of Support Piece, Change Lever, Slide Plate (L) & Slide Plate (R)
- Disassembly of Cam Gear
- Assembly of Tray Base Assembly

CAUTION NOTE:
Please use original screw and at correct locations.

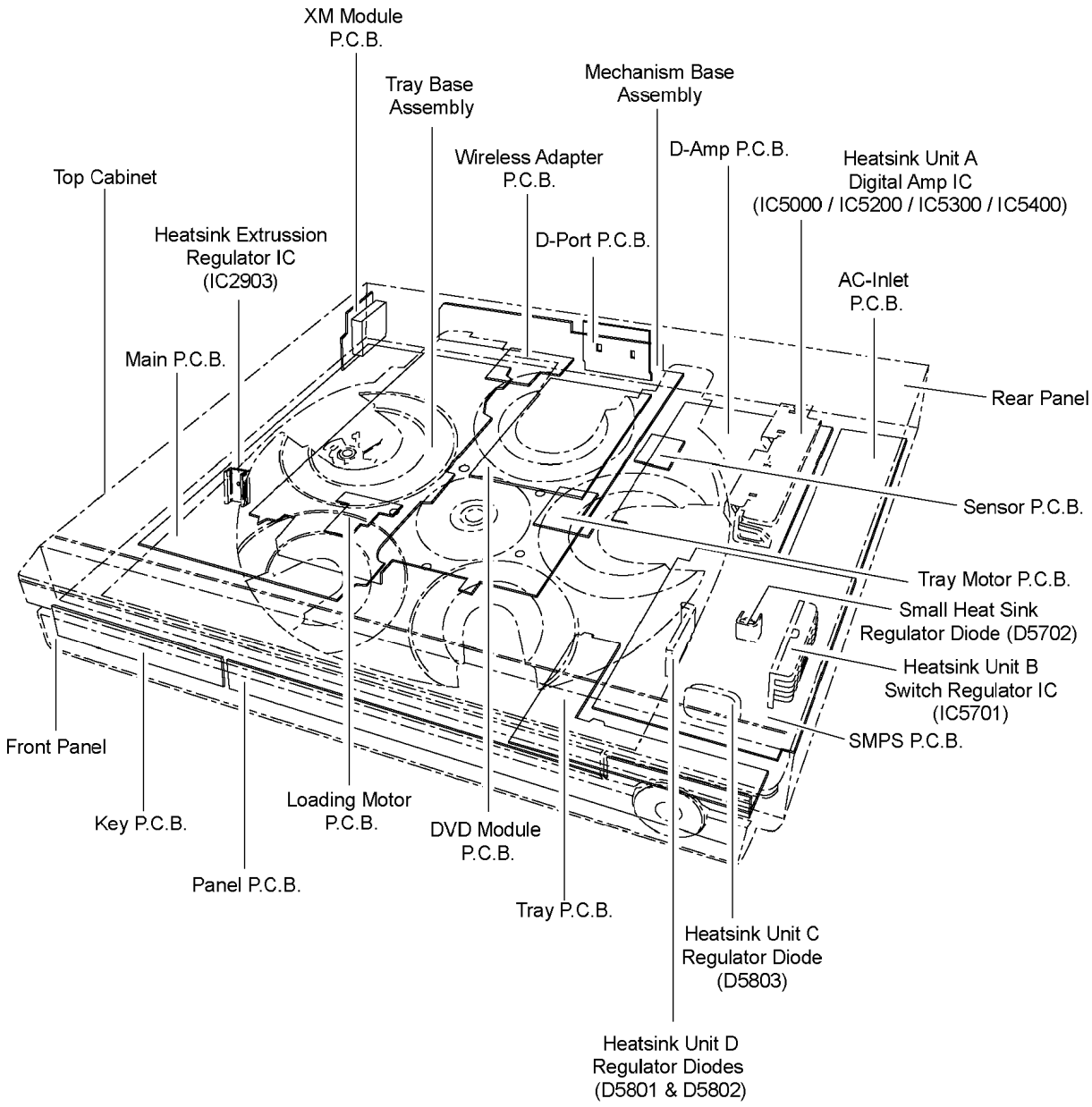
Below shown is the part no. of different screw types used:

- ⓐ :RHD30007-K2J
- ⓑ :RHD30119-S
- ⓒ :RHD26046
- ⓓ :XTB3+16JFJ
- ⓔ :RHD30107-1
- ⓕ :RHD30111-3
- ⓖ :XTW3+8TFJ
- ⓗ :XTB3+10JFJ
- ⓘ :XTWS3+10SFJ
- ⓙ :XTN26+8GFJ
- ⓚ :XTN26+14JFJK
- ⓛ :XTB3+8JFJ
- ⓜ :XTB3+6JFJ

10.1. Disassembly Flow Chart

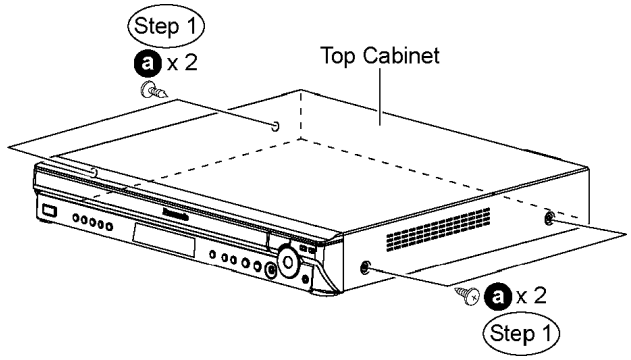

10.3. Top Cabinet
10.9. Rear Panel
10.4. Tray Lid Assembly
10.10. XM Module P.C.B.
10.5. Front Panel
10.6. Panel & Key P.C.B.
10.7. Tray Base Assembly
10.8. Mechanism Base Assembly
10.12. Tray P.C.B.
10.18. SMPS & AC-Inlet P.C.B.
10.11. Wireless Adapter P.C.B.
10.13. D-Amp P.C.B.
10.16. Main P.C.B.
10.19. D-Port P.C.B.
10.34. Magnet Holder, Washer, Magnet & Clamper
10.30. Traverse Unit
10.35. Support Piece, Change Lever, Slide Plate (L) & Slide Plate (R)
10.31. Pulley Gear
10.32. Loading Motor P.C.B.
10.36. Cam Gear
10.33. Drive Gear (A) & Drive Gear (B)
10.17. Regulator IC (IC2903)
10.14. Digital Amp IC (IC5000)
10.15. DVD Module P.C.B.
10.20. Switch Regulator IC (IC5701)
10.21. Regulator Diode (D5803)
10.22. Regulator Diodes (D5801 & D5802)
10.23. Regulator Diode (D5702)
10.24. Tray Guide (L) & Tray Guide (R)
10.25. Rotary Tray
10.26. Open Lock Gear
10.27. Close Lock Gear
10.28. Tray Motor P.C.B.
10.29. Sensor P.C.B.

10.2. Main Components and P.C.B. Locations



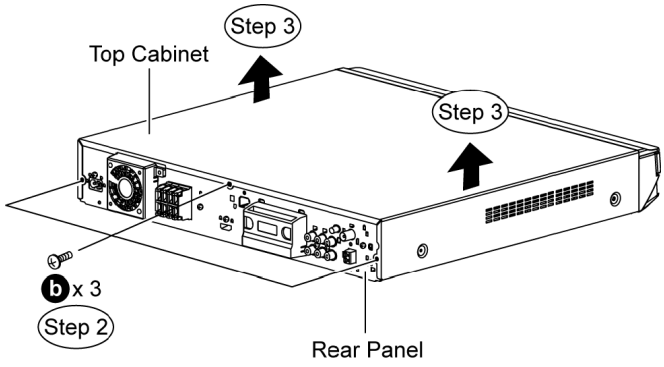
10.3. Disassembly of Top Cabinet

Step 1 Remove 4 screws from the top cabinet.



Step 2 Remove 3 screws from the rear panel.

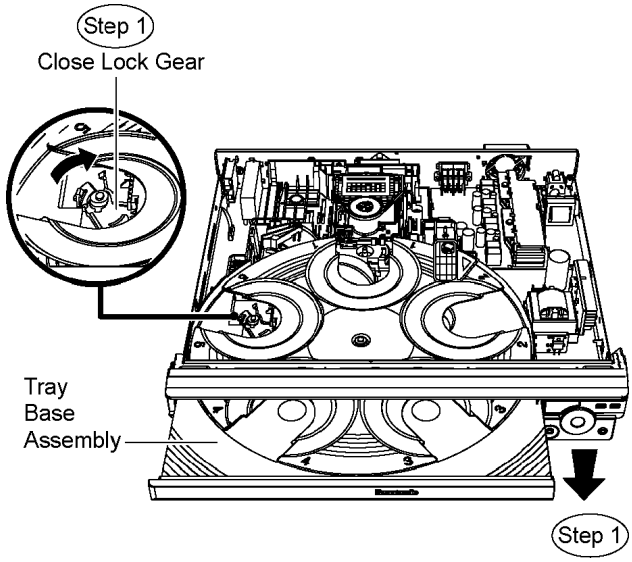
Step 3 Lift up and remove the top cabinet.



10.4. Disassembly of Tray Lid Assembly

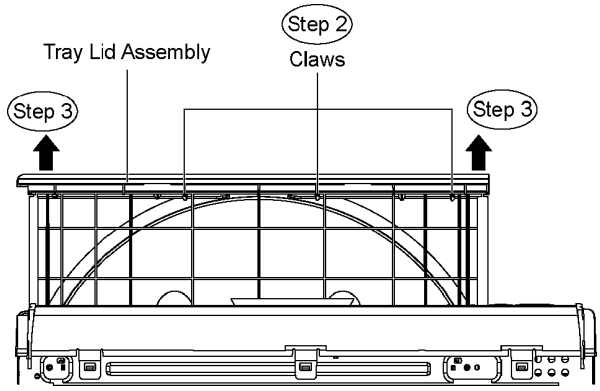
・Follow (Step 1) to (Step 3) of Item 10.3.

Step 1 Keep the close lock gear pressed in clockwise direction, then move the tray base assembly halfway out in the direction of the arrow.

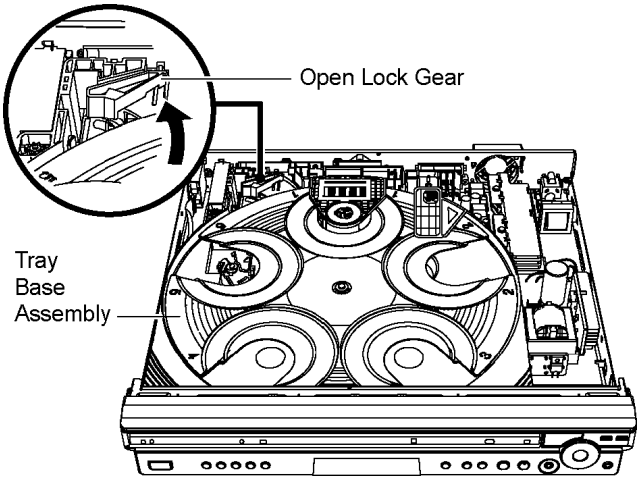


Step 2 Release the claws at the bottom of the tray lid assembly.

Step 3 Remove the tray lid assembly in the direction of arrow.



Note: You can push back the tray base assembly by keeping the open lock gear pressed in anti clockwise direction.

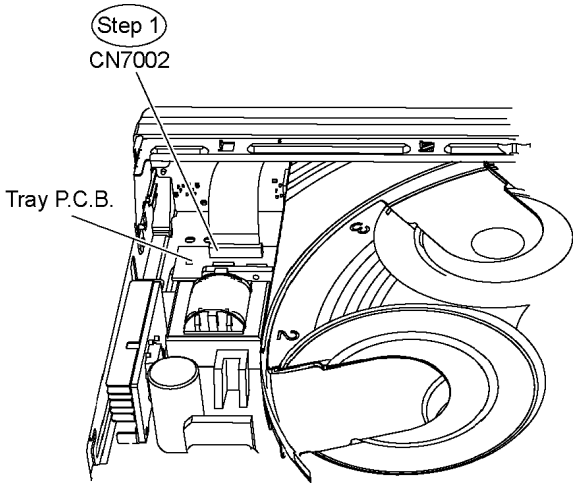


10.5. Disassembly of Front Panel

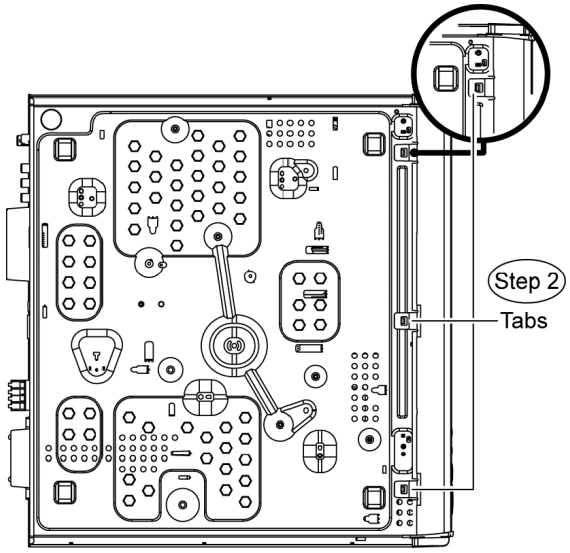
・Follow (Step 1) to (Step 3) of Item 10.3.

・Follow (Step 1) to (Step 3) of Item 10.4.

Step 1 Detach FFC cable from the connector (CN7002) on Tray P.C.B.

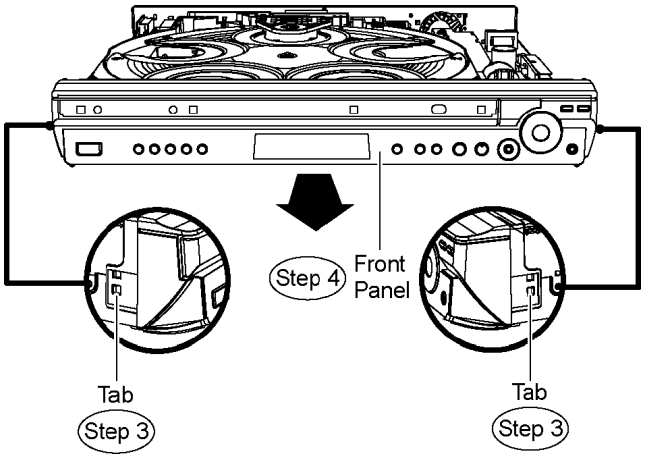


Step 2 Release the tabs at the bottom of the front panel.



Step 3 Release the tabs at each side of the front panel.

Step 4 Remove the front panel in the direction of arrow.



10.6. Disassembly of Panel P.C.B. & Key P.C.B.

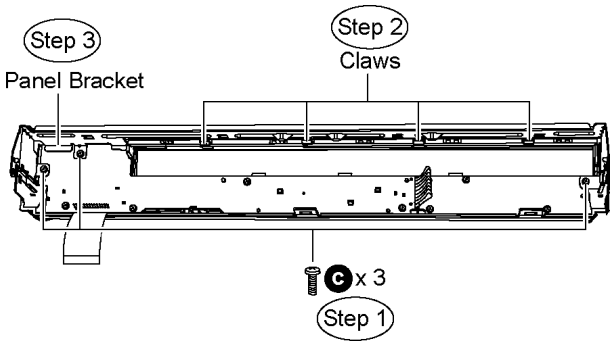
- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.

- Disassembly of Panel Bracket

Step 1 Remove 3 screws.

Step 2 Release the claws on the front panel.

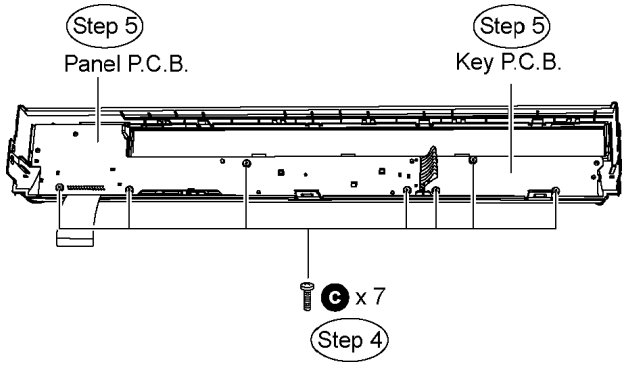
Step 3 Remove the panel bracket.



- Disassembly of Panel P.C.B. & Key P. C. B.

Step 4 Remove 7 screws.

Step 5 Remove Panel P.C.B. and Key P.C.B.

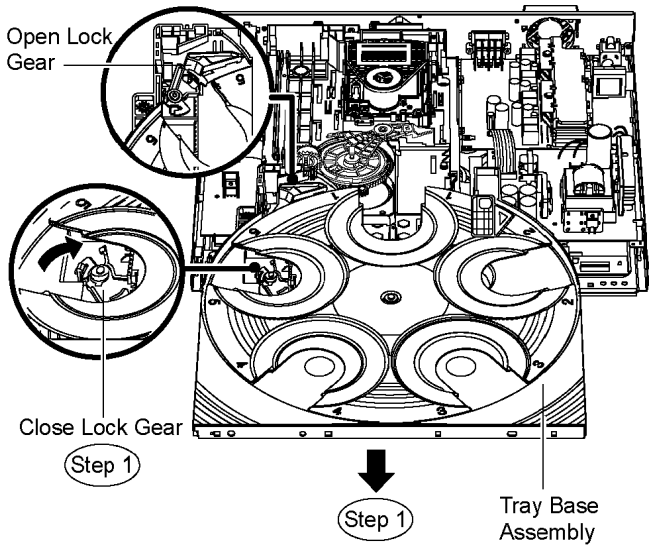


10.7. Dissassembly of Tray Base Assembly

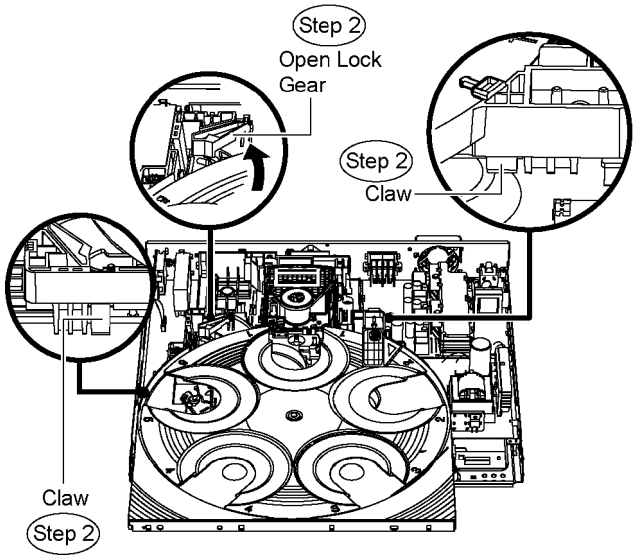
- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.

Step 1 Keep the close lock gear pressed in clockwise direction and move the tray base assembly in the direction of the arrow until the end of it.

Note: Make sure the open lock gear is kept at the position as shown in the diagram below.

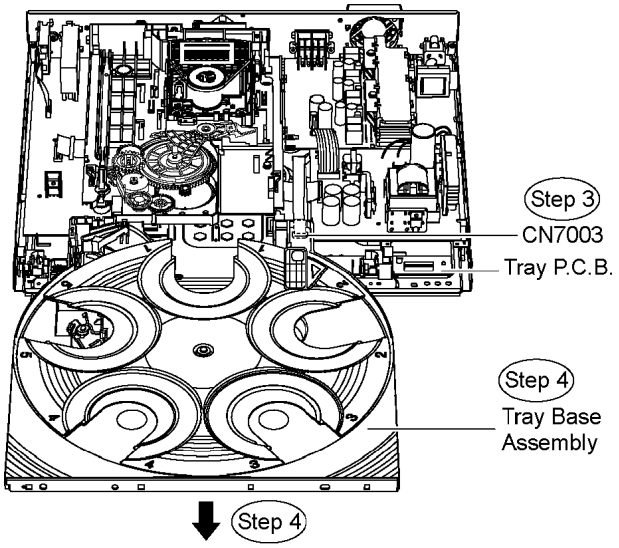


Step 2 Press and hold the open lock gear in anti clockwise direction, then push and release the claw at each side of the tray base assembly in the direction of arrow.



Step 3 Detach FFC cable from the connector (CN7003) on Tray P.C.B.

Step 4 Remove the tray base assembly in the direction of the arrow.



Caution: Avoid using excessive strong force when removing the tray base assembly.

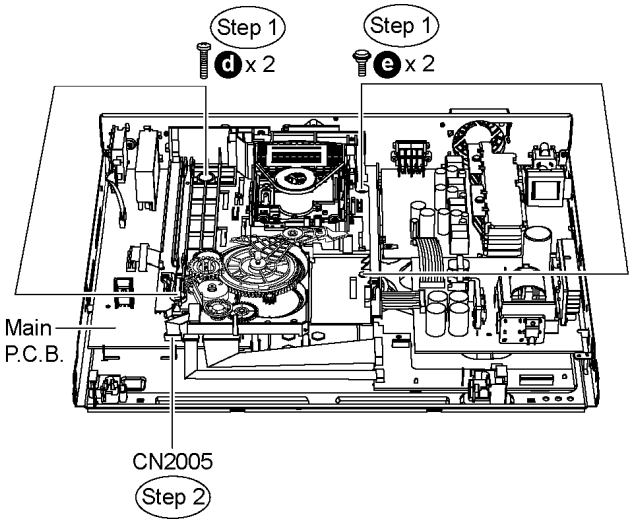
10.8. Disassembly of Mechanism Base Assembly

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.

Step 1 Remove 2 screws from each side of the mechanism base assembly.

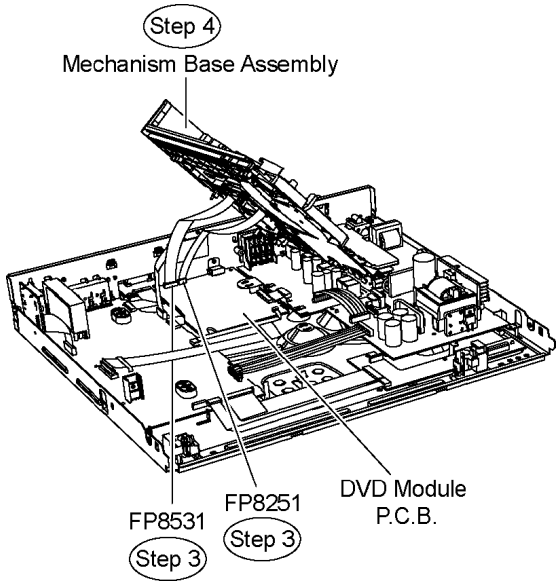
Caution: Take note of the screw type used. During assembling, use the correct screw type and at the correct location.

Step 2 Detach FFC cable from the connector (CN2005) on Main P.C.B.



Step 3 Lift up the right side of the mechanism unit to detach FFC cables from the connectors (FP8251 & FP8531) on DVD Module P.C.B.

Step 4 Remove the mechanism base assembly.

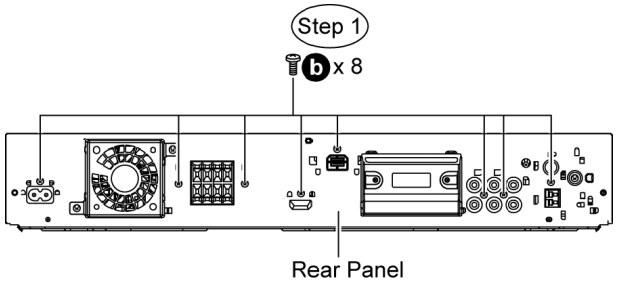


Caution: Do not use strong or excessive force to avoid damage to FFC cables.

10.9. Disassembly of Rear Panel

- Follow (Step 1) to (Step 3) of Item 10.3.

Step 1 Remove 8 screws from the rear panel.



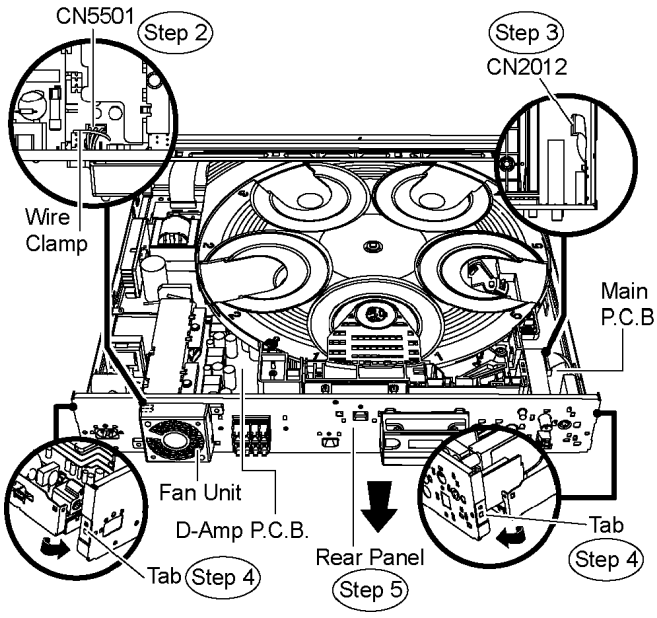
Step 2 Remove the wire clamp to detach FFC cable from the connector (CN5501, fan unit) on D-Amp P.C.B.

Step 3 Detach FFC cable from connector (CN2012) on Main

P.C.B.

Step 4 Release the tabs of the rear panel in the direction of the arrow.

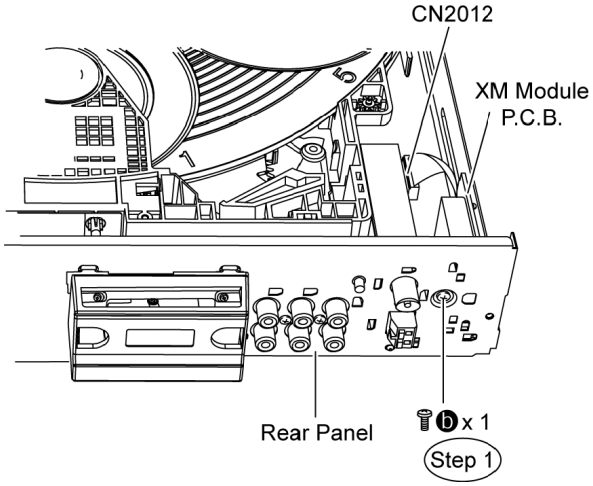
Step 5 Remove the rear panel in the direction of arrow.



10.10. Disassembly of XM Module P.C.B.

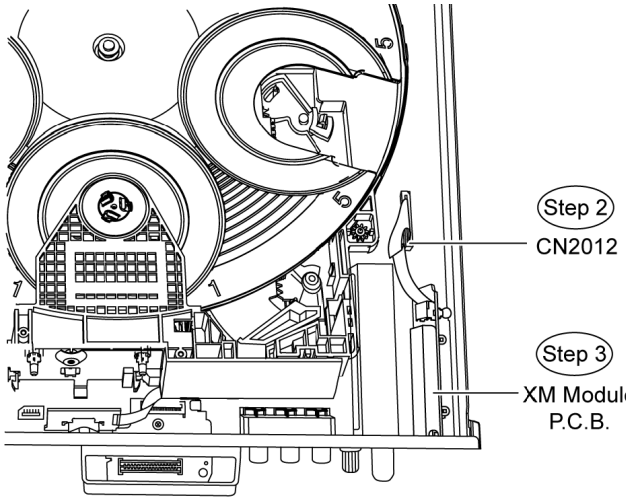
- Follow (Step 1) to (Step 3) of Item 10.3

Step 1 Remove 1 screw from the rear panel.



Step 2 Detach FFC cable from the connector (CN2012) on Main P.C.B.

Step 3 Lift up and remove the XM Module P.C.B. from the rear panel.

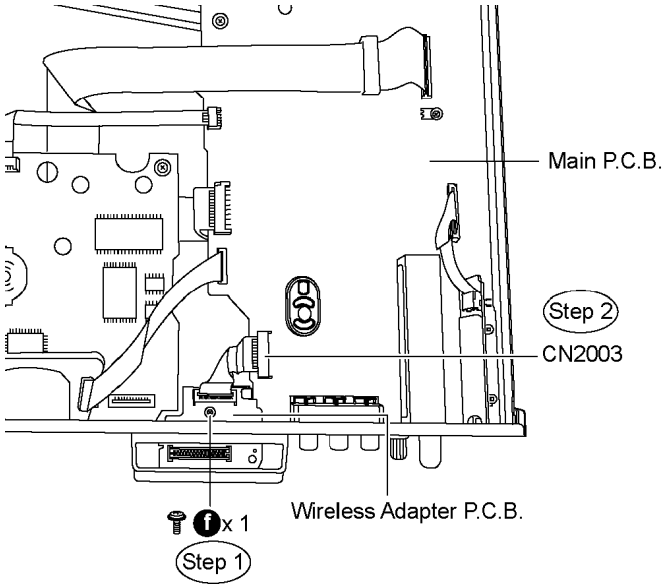


10.11. Disassembly of Wireless Adapter P.C.B.

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.
- Follow (Step 1) to (Step 4) of Item 10.8.

Step 1 Remove 1 screw from Wireless Adapter P.C.B.

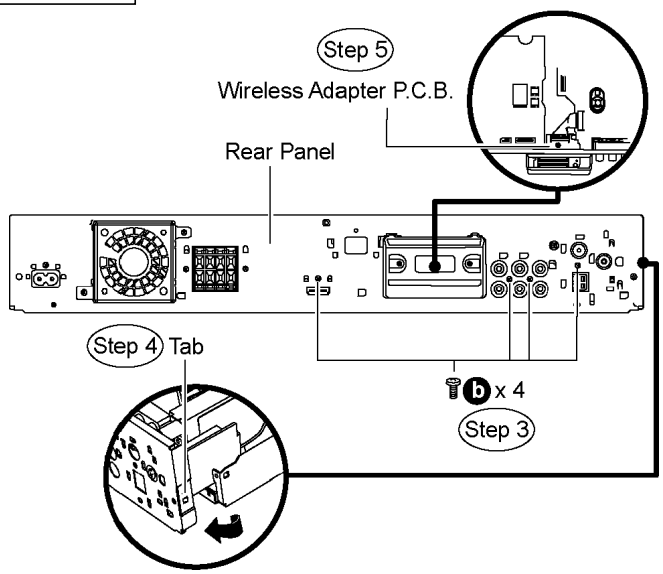
Step 2 Detach FFC cable from the connector (CN2003) on Main P.C.B.

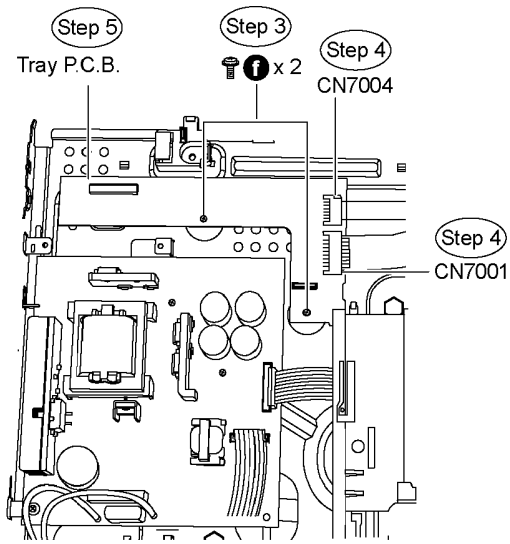


Step 3 Remove 4 screws on rear panel.

Step 4 Release the tab in direction of the arrow.

Step 5 Remove the Wireless Adapter P.C.B.





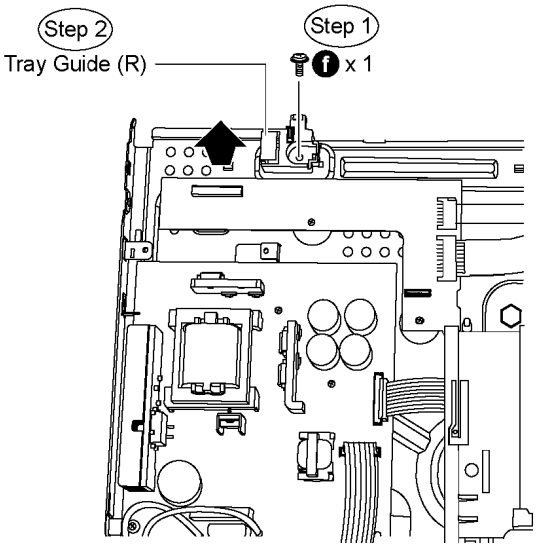
10.12. Disassembly of Tray P.C.B.

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.

- Disassembly of Tray Guide (R)

Step 1 Remove 1 screw.

Step 2 Remove the tray guide (R) in the direction of the arrow.



- Disassembly of Tray P.C.B.

Step 3 Remove 2 screws

Step 4 Detach FFC cable from the connectors (CN7001 & CN7004) on Tray P.C.B.

Step 5 Remove Tray P.C.B.

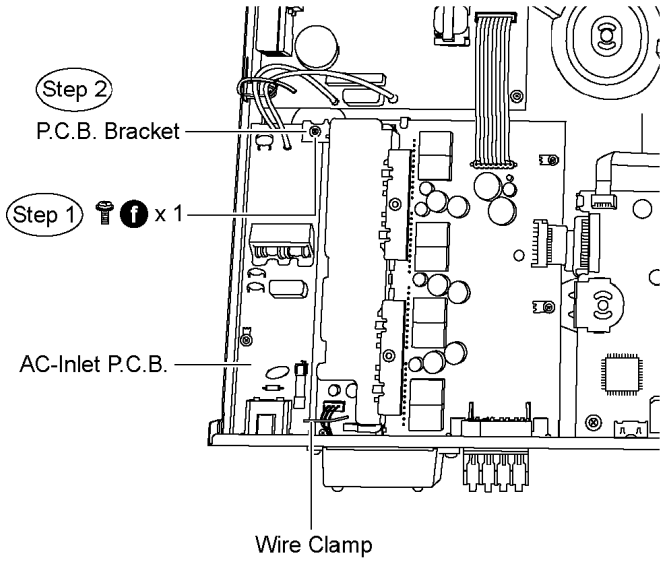
10.13. Disassembly of D-Amp P.C.B

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.
- Follow (Step 1) to (Step 4) of Item 10.8.

- Disassembly of P.C.B. Bracket

Step 1 Remove 1 screw from AC-Inlet P.C.B.

Step 2 Remove the P.C.B. bracket.

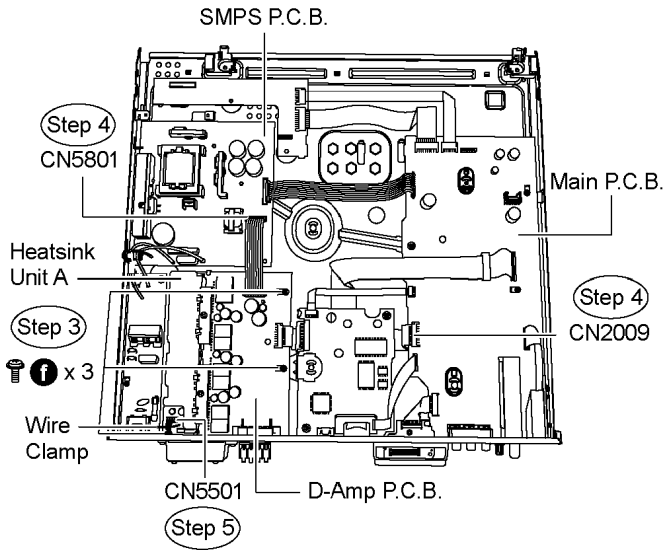


- Disassembly of D-Amp P.C.B.

Step 3 Remove 3 screws from D-Amp P.C.B.

Step 4 Detach FFC cable from the connectors (CN2009) on Main P.C.B., and (CN5801) on SMPS P.C.B.

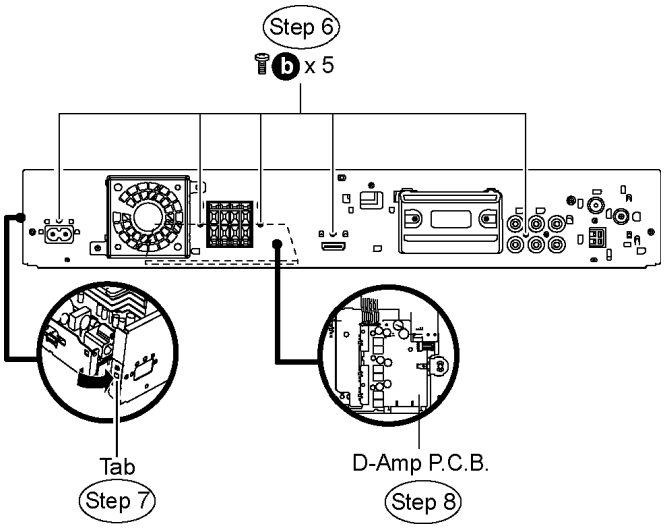
Step 5 Remove the wire clamp to detach FFC cable from the connector (CN5501) on D-Amp P.C.B.



Step 6 Remove 5 screws on the rear panel.

Step 7 Release the tab in the direction of the arrow.

Step 8 Remove D-Amp P.C.B.

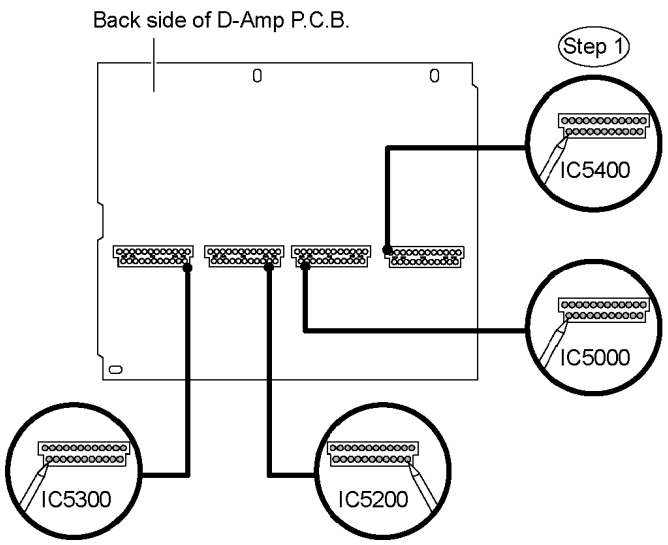


Caution: Be careful of the Heatsink Unit A, which has high temperature after prolonged use, when removing D-Amp P.C.B.

10.14. Disassembly of Digital Amp IC (IC5000)

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.
- Follow (Step 1) to (Step 4) of Item 10.8.
- Follow (Step 1) to (Step 8) of Item 10.13.

Step 1 Desolder pins of the digital amp IC (IC5000) on the back side of D-Amp P.C.B.

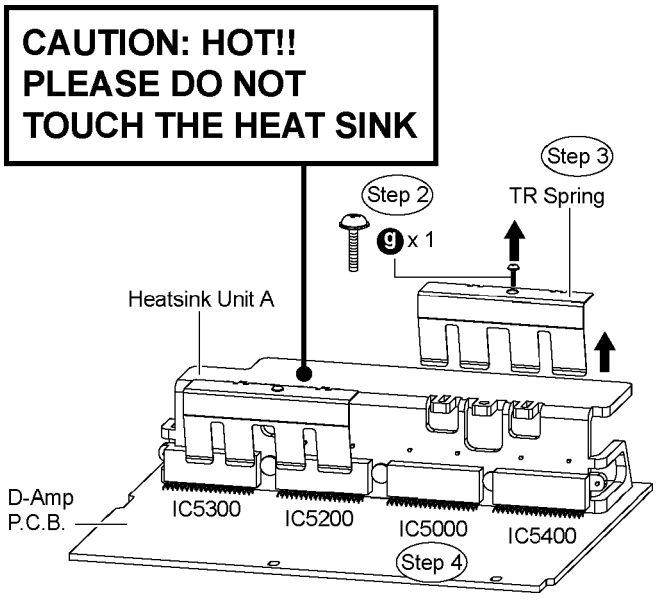


Step 2 Remove 1 screw from the top of the heatsink unit A.

Step 3 Remove the TR spring in the direction of arrow.

Step 4 Remove the digital amp IC (IC5000) from the heatsink unit A.

Caution: Handle the heatsink unit A with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



Note : For disassembly of the digital amp ICs (IC5200, IC5300 & IC5400), repeat the (Step 1) to (Step 4). Refer to the diagrams of D-Amp P.C.B. (Item 10.13.) for location of the parts.

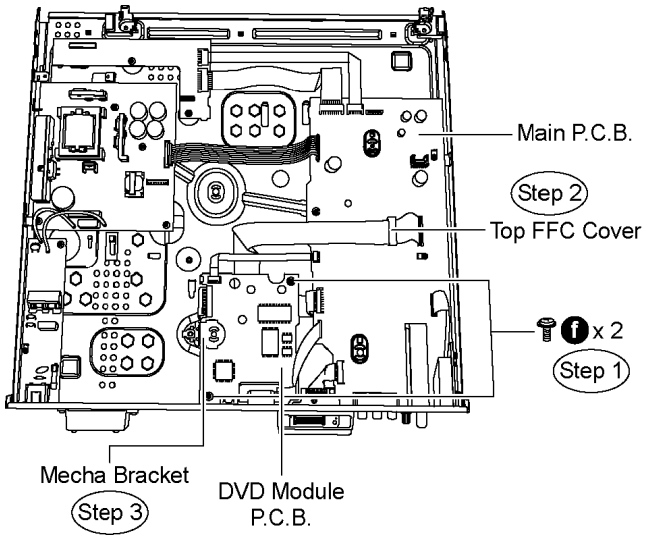
10.15. Disassembly of DVD Module P.C.B.

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.
- Follow (Step 1) to (Step 4) of Item 10.8.
- Follow (Step 1) to (Step 8) of Item 10.13.

Step 1 Remove 2 screws on DVD Module P.C.B.

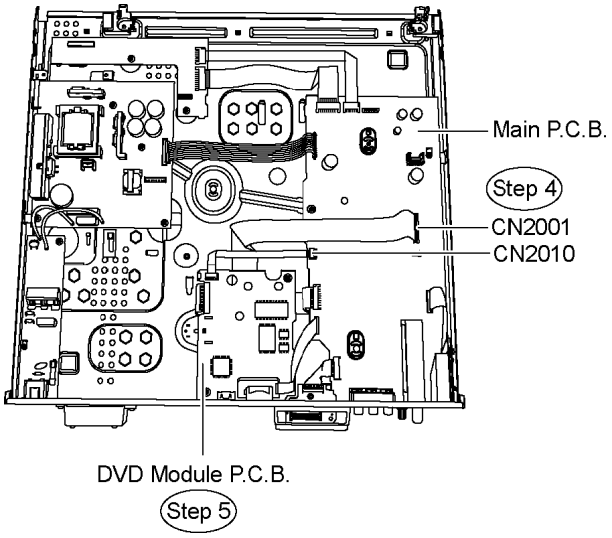
Step 2 Remove the top FFC cover from Main P.C.B.

Step 3 Remove the mecha bracket.



Step 4 Detach FFC cable from the connectors (CN2001 & CN2010) on Main P.C.B.

Step 5 Remove DVD Module P.C.B.



Caution: Do not use strong or excessive force to avoid damage to FFC cables.

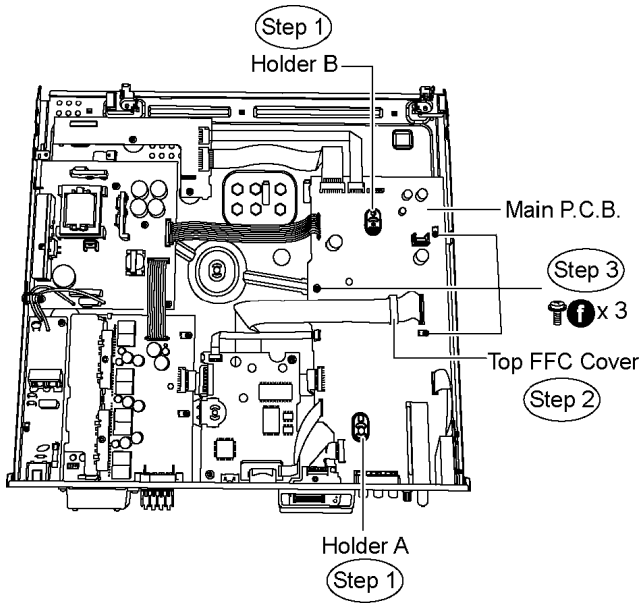
10.16. Disassembly of Main P.C.B.

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.
- Follow (Step 1) to (Step 4) of Item 10.8.

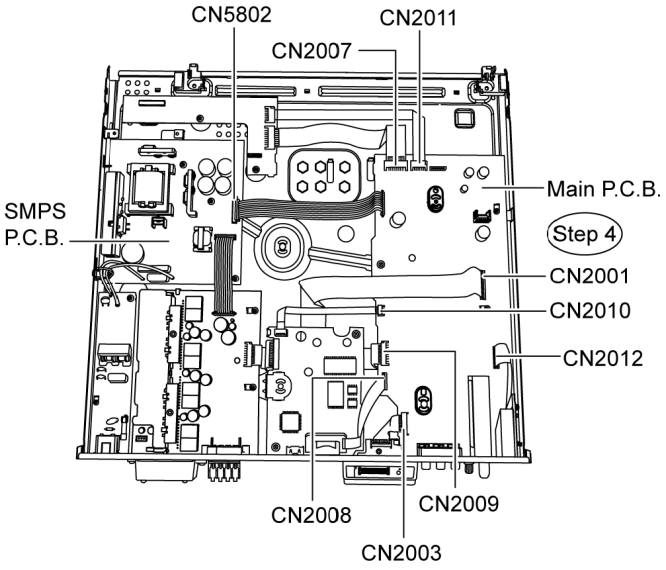
Step 1 Remove the holder A & B from Main P.C.B.

Step 2 Remove the top FFC cover from Main P.C.B.

Step 3 Remove 3 screws from Main P.C.B.



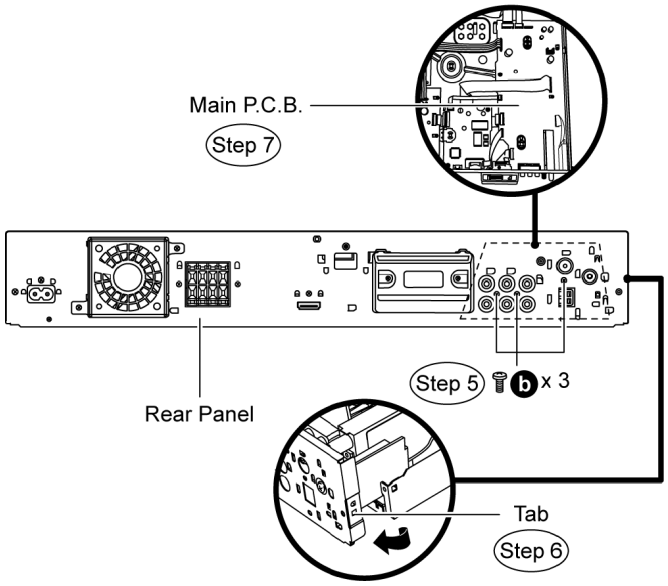
Step 4 Detach FFC cable from the connectors (CN5802) on SMPS P.C.B. and on Main P.C.B. (CN2001, CN2003, CN2007, CN2008, CN2009, CN2010, CN2011, CN2012)



Step 5 Remove 3 screws from the rear panel.

Step 6 Release the tab in the direction of arrow.

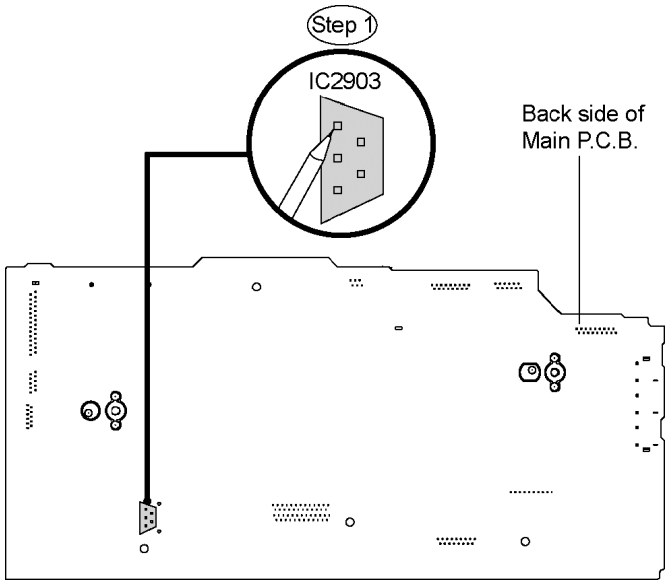
Step 7 Remove the Main P.C.B.



10.17. Disassembly of Regulator IC (IC2903)

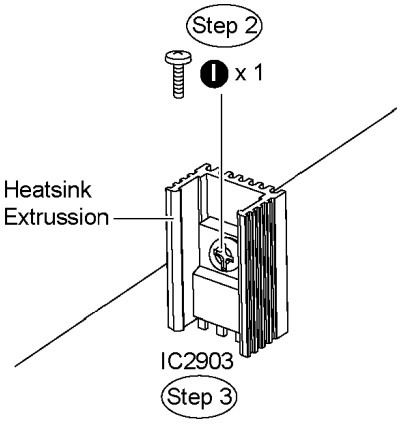
- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.
- Follow (Step 1) to (Step 4) of Item 10.8.
- Follow (Step 1) to (Step 7) of Item 10.16.

Step 1 Desolder pins of the regulator IC (IC2903) on the back side of Main P.C.B.



Step 2 Remove 1 screw.

Step 3 Remove the regulator IC (IC2903) from the heatsink extrussion.



Note : Refer to the diagrams of Main P.C.B. (Item 10.16.) for location of the part.

10.18. Disassembly of SMPS & AC-Inlet P.C.B.

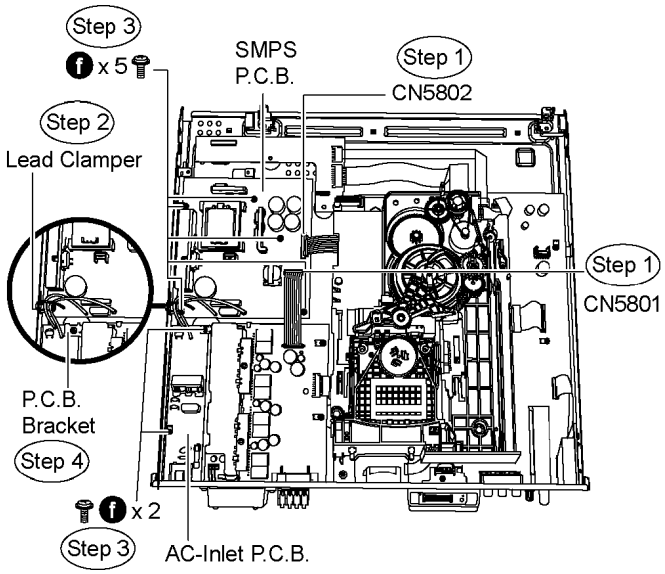
- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.

Step 1 Detach FFC cable from the connectors (CN5801 & CN5802) on SMPS P.C.B.

Step 2 Release the lead clamper.

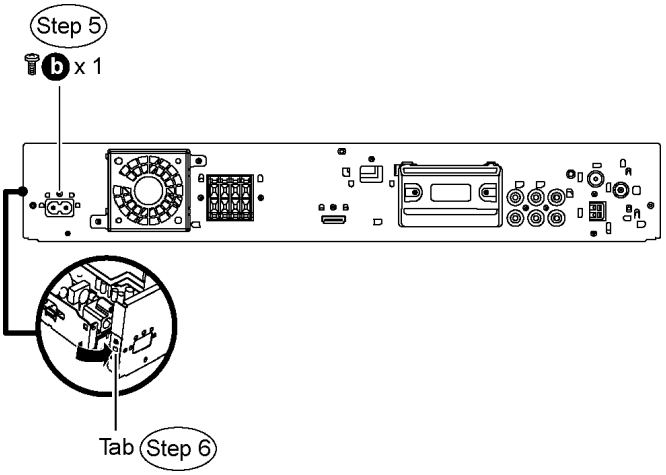
Step 3 Remove 2 screws from AC-Inlet P.C.B. & 5 screws from SMPS P.C.B.

Step 4 Remove the P.C.B. bracket.

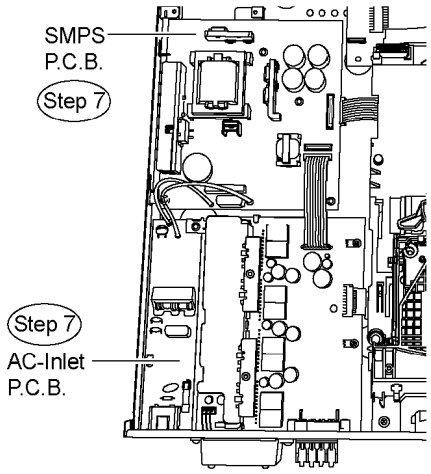


Step 5 Remove 1 screw from the rear panel.

Step 6 Release the tab in the direction of arrow.



Step 7 Remove SMPS & AC-Inlet P.C.B.

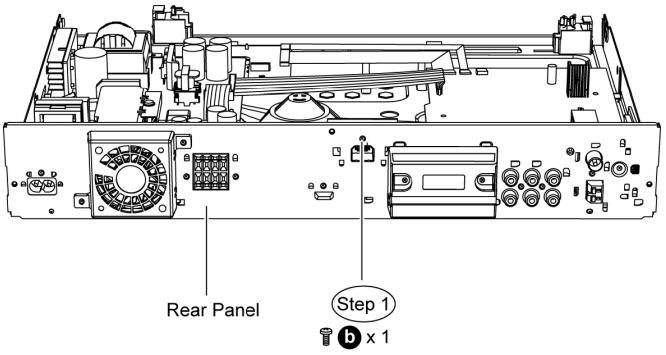


Caution: Be careful of power heatsinks located on D-Amp P.C.B., which has high temperature after prolonged use, when removing it.

10.19. Disassembly of D-Port P.C.B.

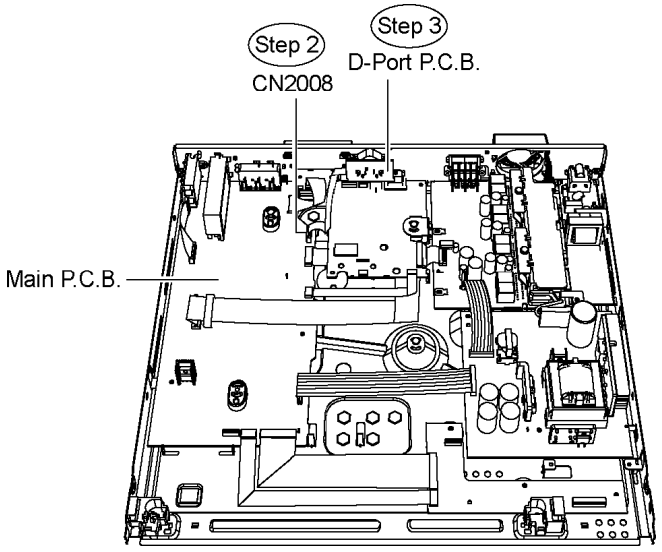
- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.
- Follow (Step 1) to (Step 4) of Item 10.8.

Step 1 Remove 1 screw from the rear panel.



Step 2 Detach FFC cable from the connector (CN2008) on Main P.C.B.

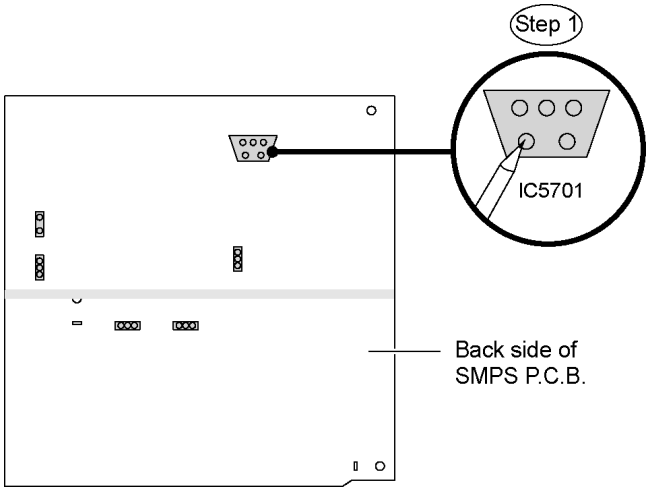
Step 3 Remove D-Port P.C.B.



10.20. Disassembly of Switch Regulator IC (IC5701)

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.
- Follow (Step 1) to (Step 7) of Item 10.18.

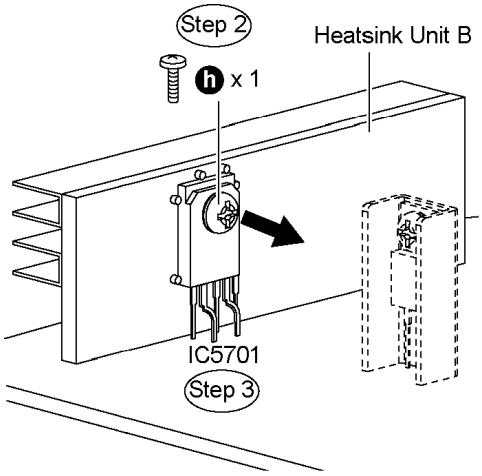
Step 1 Desolder pins of the switch regulator IC (IC5701) on the back side of SMPS P.C.B.



Step 2 Remove 1 screw.

Step 3 Remove the switch regulator IC (IC5701) from the heatsink unit B.

Caution: Handle the heatsink unit B with caution due to its high temperature after prolonged use. Touching it may lead to injuries.

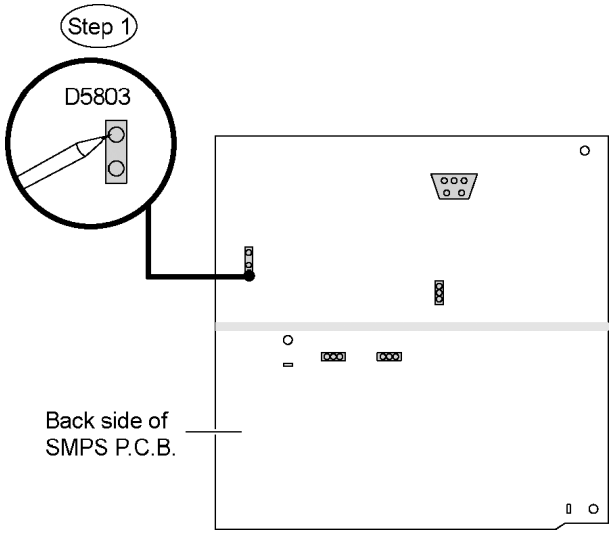


Note : Refer to the diagrams of SMPS P.C.B. (Item 10.18.) for location of the parts.

10.21. Disassembly of Regulator Diode (D5803)

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.
- Follow (Step 1) to (Step 7) of Item 10.18.

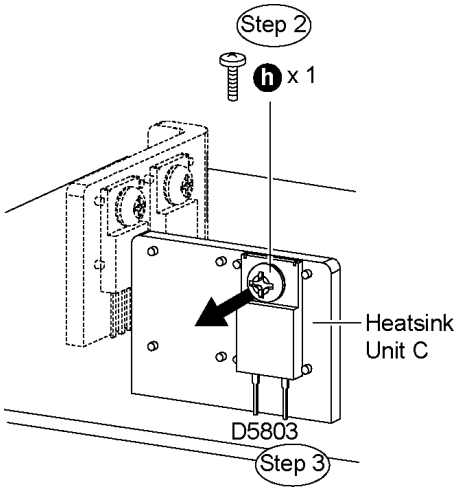
Step 1 Desolder pins of the regulator (D5803) on the back side of SMPS P.C.B.



Step 2 Remove 1 screw.

Step 3 Remove the diode (D5803) from the heatsink unit C.

Caution: Handle the heatsink unit C with caution due to its high temperature after prolonged use. Touching it may lead to injuries.

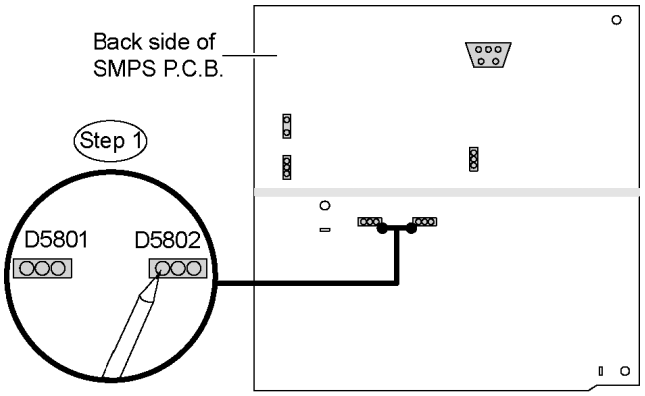


Note : Refer to the diagrams of SMPS P.C.B. (Item 10.18.) for location of the parts.

10.22. Disassembly of Regulator Diodes (D5801 & D5802)

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.
- Follow (Step 1) to (Step 7) of Item 10.18.

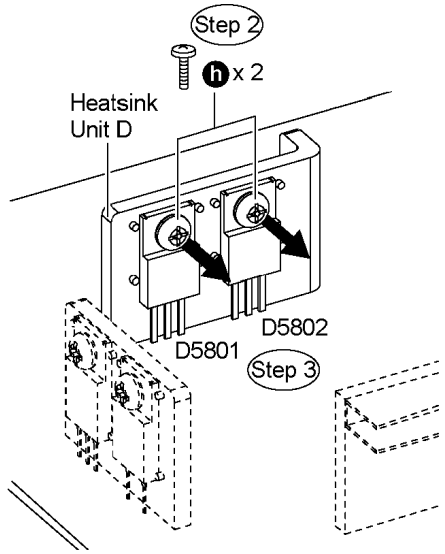
Step 1 Desolder pins of the regulator diodes (D5801 & D5802) on the back side of SMPS P.C.B.



Step 2 Remove 2 screws.

Step 3 Remove the regulator diodes (D5801 & D5802) from the heatsink unit D.

Caution: Handle the heatsink unit D with caution due to its high temperature after prolonged use. Touching it may lead to injuries.

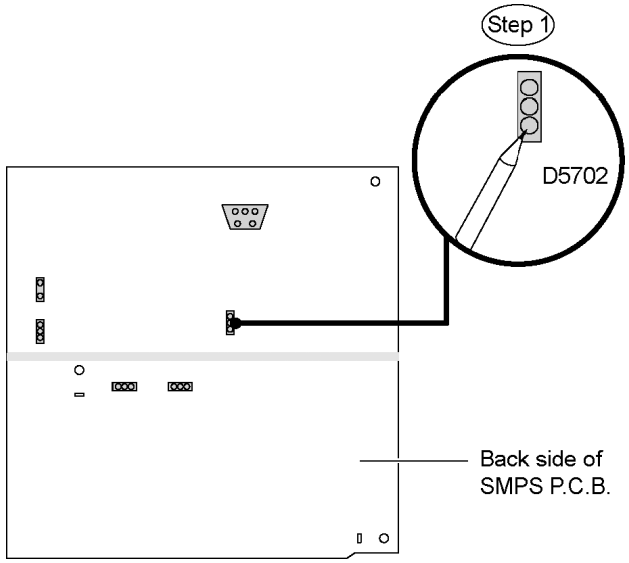


Note : Refer to the diagrams of SMPS P.C.B. (Item 10.18.) for location of the parts.

10.23. Disassembly of Regulator Diode (D5702)

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.
- Follow (Step 1) to (Step 7) of Item 10.18.

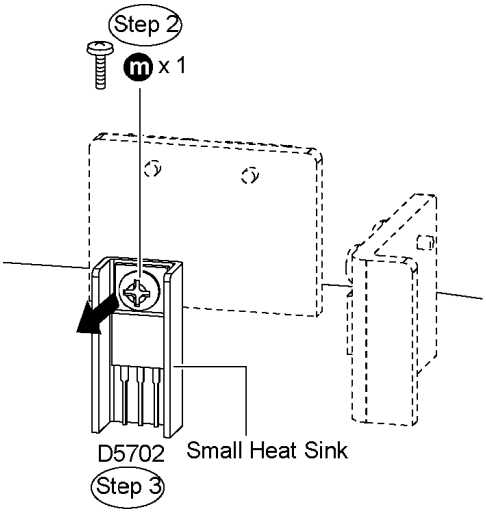
Step 1 Desolder pins of the regulator diode (D5702) on the back side of SMPS P.C.B.



Step 2 Remove 1 screw.

Step 3 Remove the regulator diode (D5702) from the small heat sink.

Caution: Handle the small heat sink with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



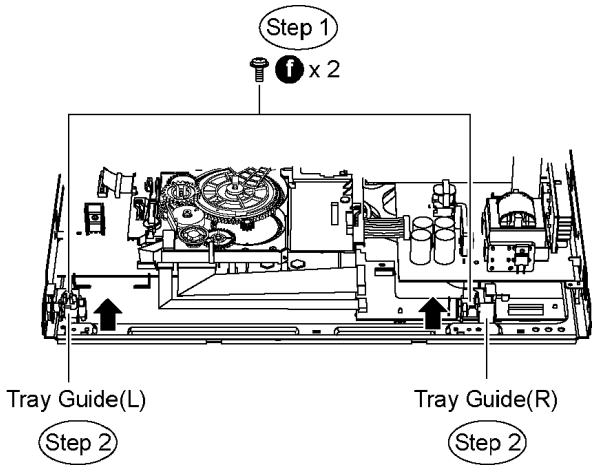
Note : Refer to the diagrams of SMPS P.C.B. (Item 10.18.) for location of the parts.

10.24. Disassembly of Tray Guide (L) & Tray Guide (R)

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.

Step 1 Remove 2 screws from the tray guide (L) and the tray guide (R) .

Step 2 Remove the tray guide (L) and the tray guide (R) in the direction of arrow.

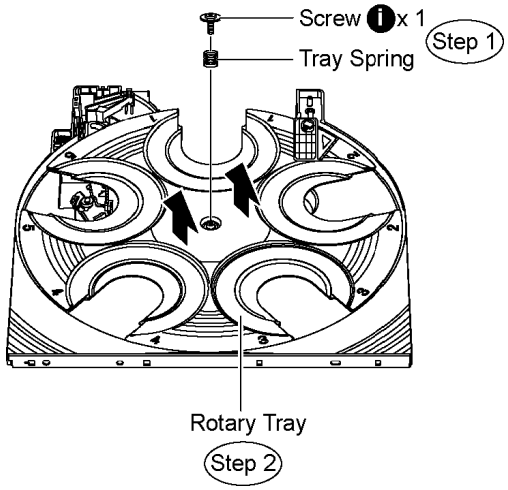


10.25. Disassembly of Rotary Tray

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.

Step 1 Remove the screw and the tray spring.

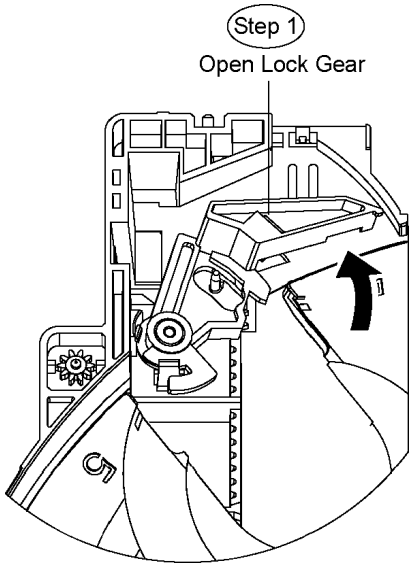
Step 2 Remove the rotary tray in the direction of arrow.



10.26. Disassembly of Open Lock Gear

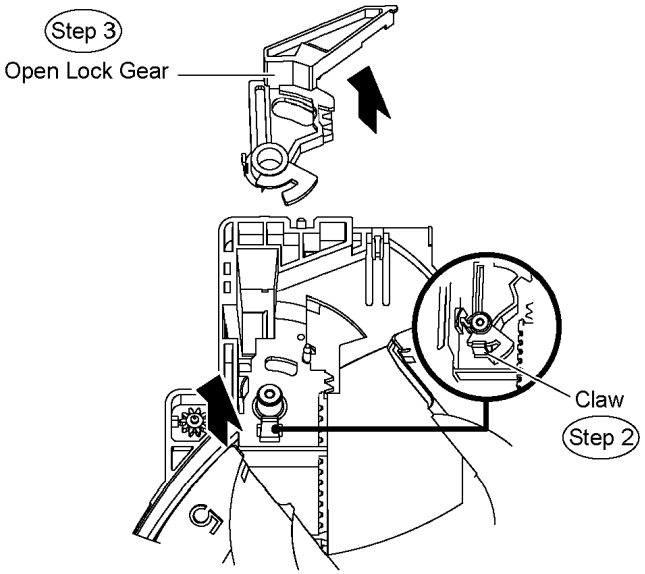
- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.

Step 1 Rotate the open lock gear in the direction of arrow. (Anti-clockwise)



Step 2 Release the claw of the open lock gear.

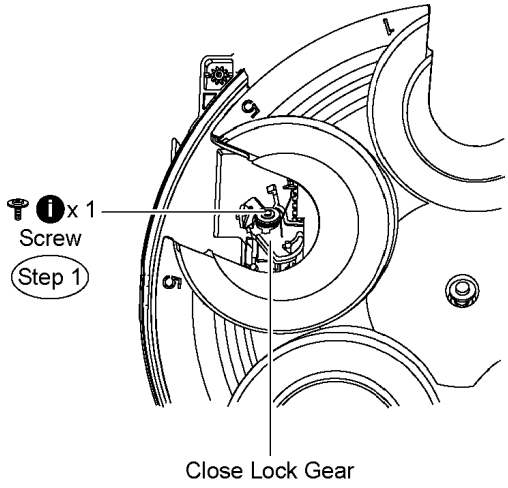
Step 3 Remove the open lock gear in the direction of arrow.



10.27. Disassembly of Close Lock Gear

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.

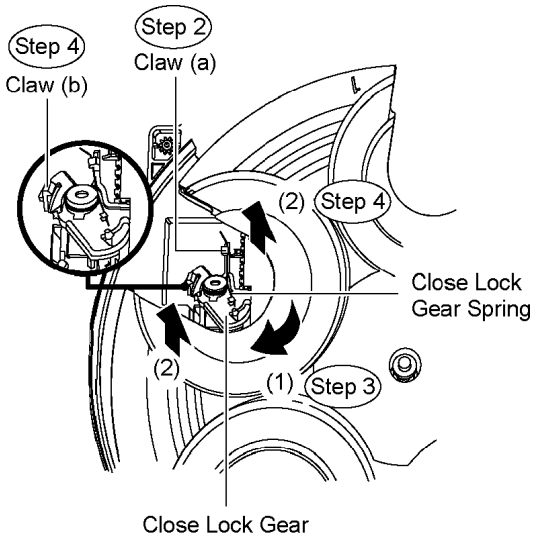
Step 1 Remove 1 screw from the close lock gear.



Step 2 Hook the close lock gear spring to claw (a).

Step 3 Rotate the close lock gear in the direction of arrow (1).

Step 4 Release claw (b) and pull out the close lock gear in the direction of arrow (2).



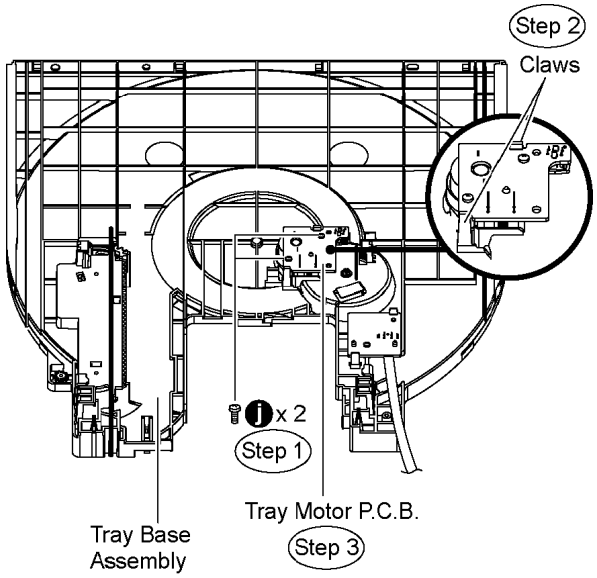
10.28. Disassembly of Tray Motor P.C.B.

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.

Step 1 Remove 2 screws from Tray Motor P.C.B.

Step 2 Release 2 claws at Tray Motor P.C.B.

Step 3 Remove Tray Motor P.C.B. from the tray base assembly.



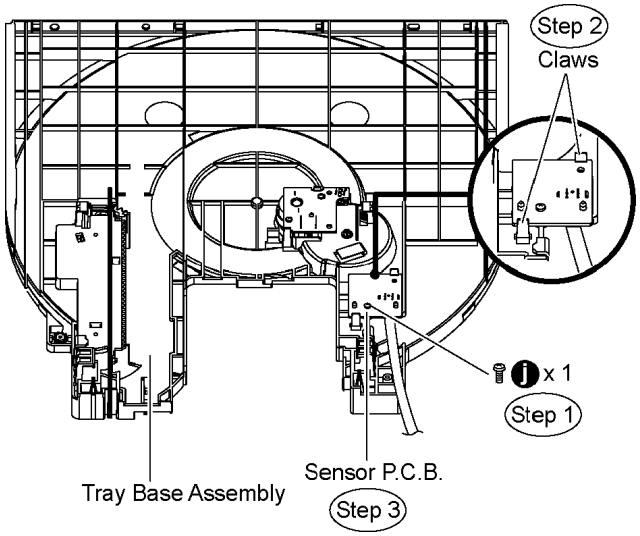
10.29. Disassembly of Sensor P.C.B.

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.

Step 1 Remove 1 screw from Sensor P.C.B.

Step 2 Release 2 claws at Sensor P.C.B.

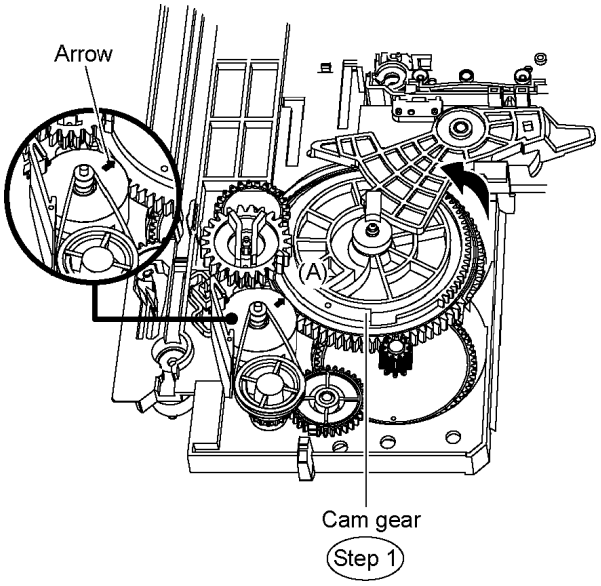
Step 3 Remove Sensor P.C.B. from the tray base assembly.



10.30. Disassembly of Traverse Unit

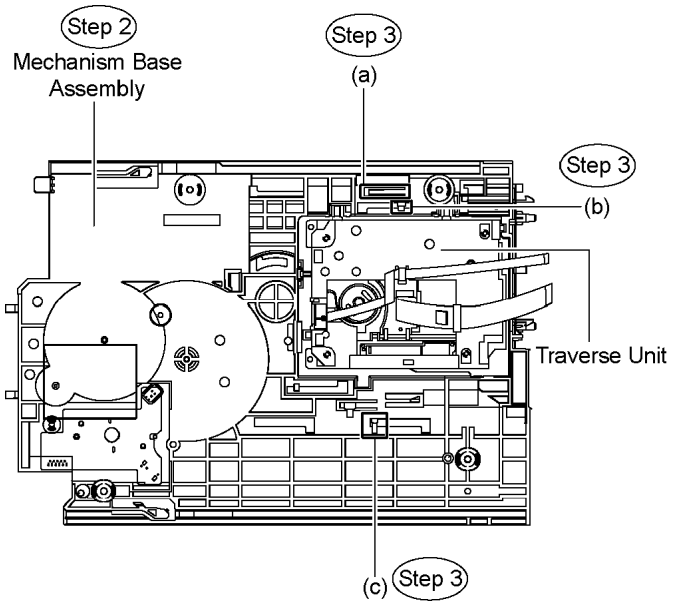
- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.
- Follow (Step 1) to (Step 4) of Item 10.8.

Step 1 Rotate the cam gear anti-clockwise. (Align at position (A) as marking on the gear with arrow)



Step 2 Flip the mechanism base assembly and place it in vertical position.

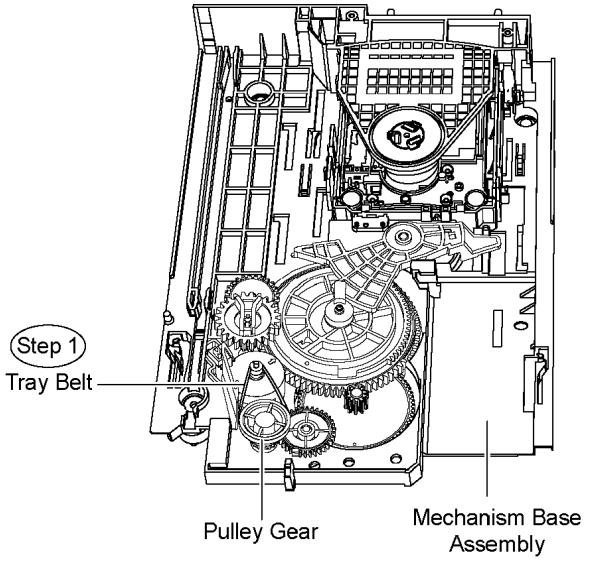
Step 3 Press upward (a), push backward (b) and press (c) to left to release the traverse unit.



10.31. Disassembly of Pulley Gear

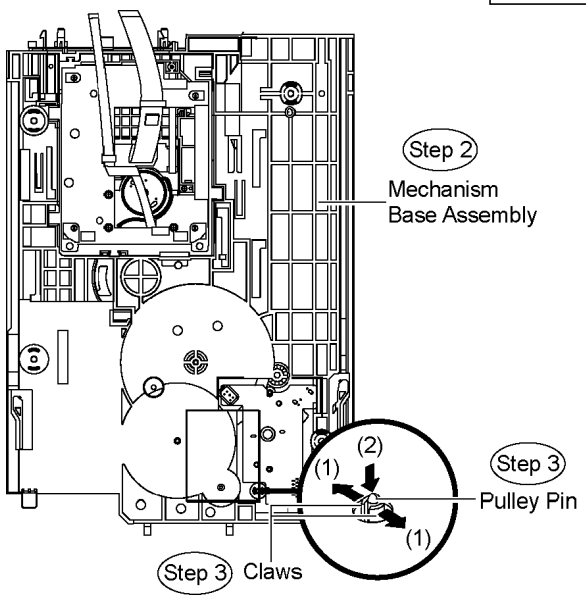
- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.
- Follow (Step 1) to (Step 4) of Item 10.8.

Step 1 Remove the tray belt from the mechanism base assembly.

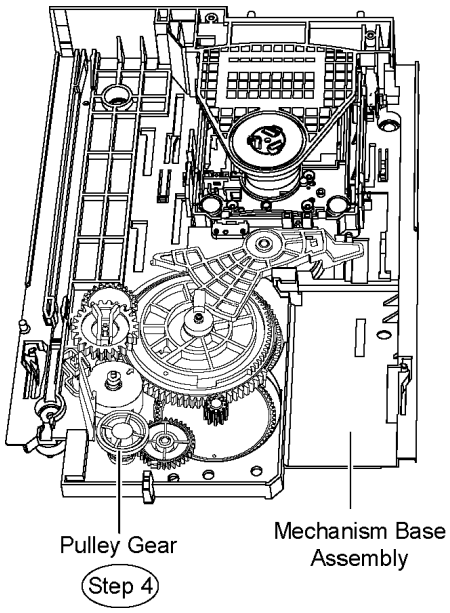


Step 2 Flip the mechanism base assembly to its reverse side.

Step 3 Release the 2 claws in the direction of arrow (1), and then press the pulley pin in the direction of arrow (2).



Step 4 Remove the pulley gear.

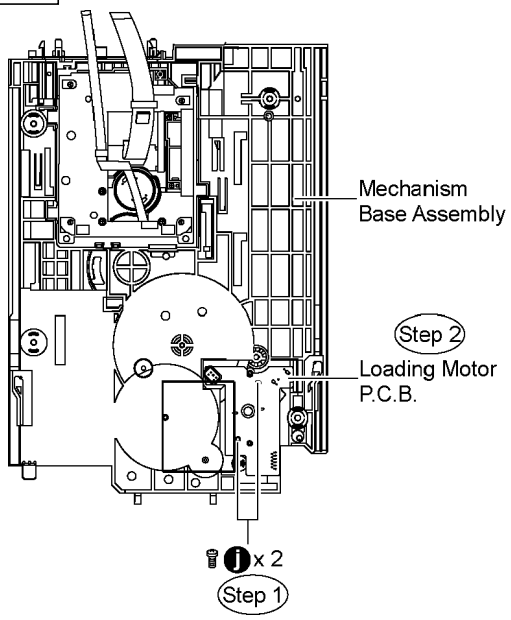


10.32. Disassembly of Loading Motor P.C.B.

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.
- Follow (Step 1) to (Step 4) of Item 10.8.

Step 1 Remove 2 screws from Loading Motor P.C.B.

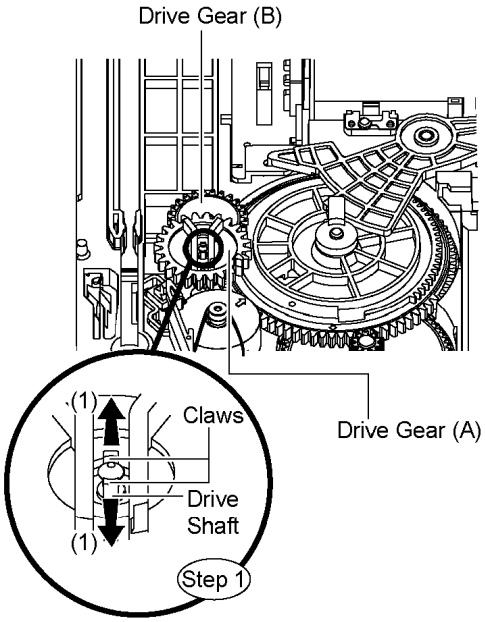
Step 2 Remove Loading Motor P.C.B. from the mechanism base assembly.



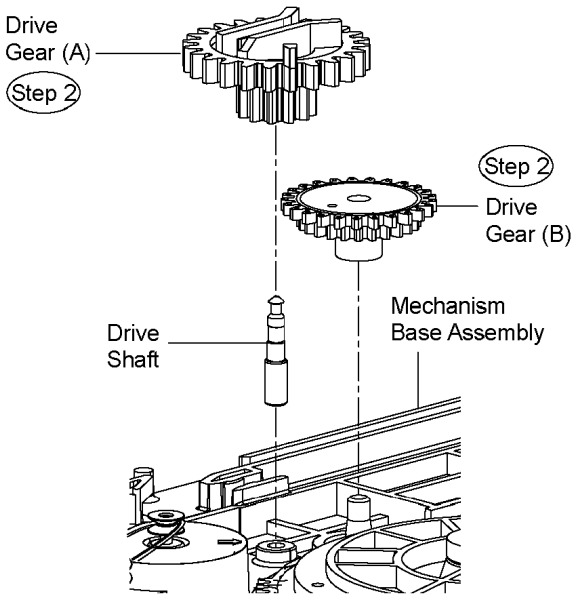
10.33. Disassembly of Drive Gear (A) & Drive Gear (B)

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.
- Follow (Step 1) to (Step 4) of Item 10.8.

Step 1 Release the claws in the direction of arrow (1), and then pull up the drive shaft.



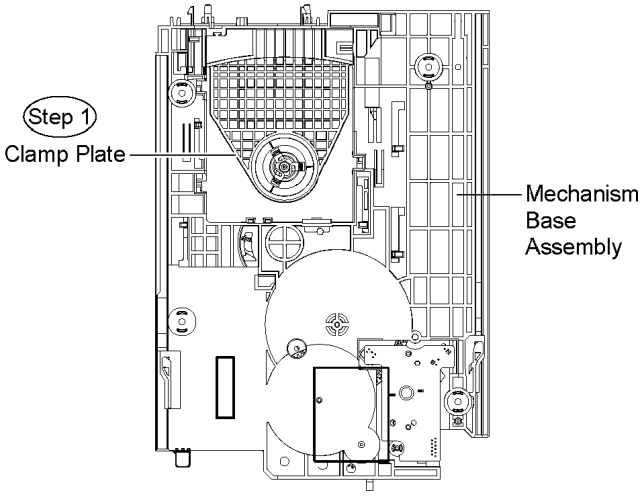
Step 2 Remove the drive gear (A) and drive gear (B) from the mechanism base assembly .



10.34. Disassembly of Magnet Holder, Washer, Magnet & Clamper

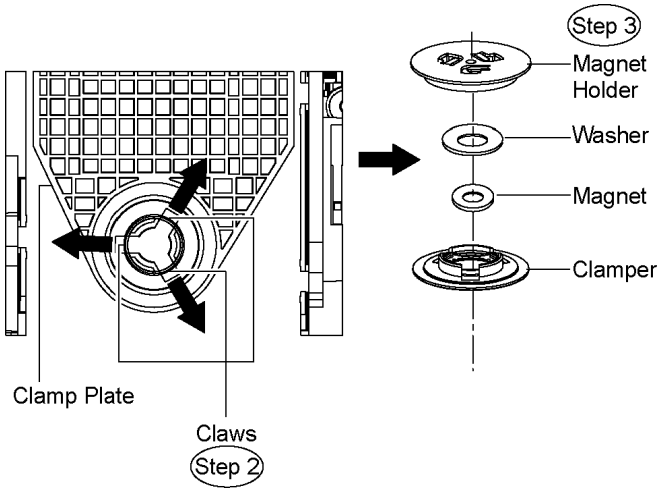
- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.
- Follow (Step 1) to (Step 4) of Item 10.8.
- Follow (Step 1) to (Step 3) of Item 10.30.

Step 1 Flip the mecha base to show the reverse side of the clamp plate.



Step 2 Release 3 claws at the clamp plate in the direction of arrow.

Step 3 Remove the magnet holder, washer, magnet & clamper.

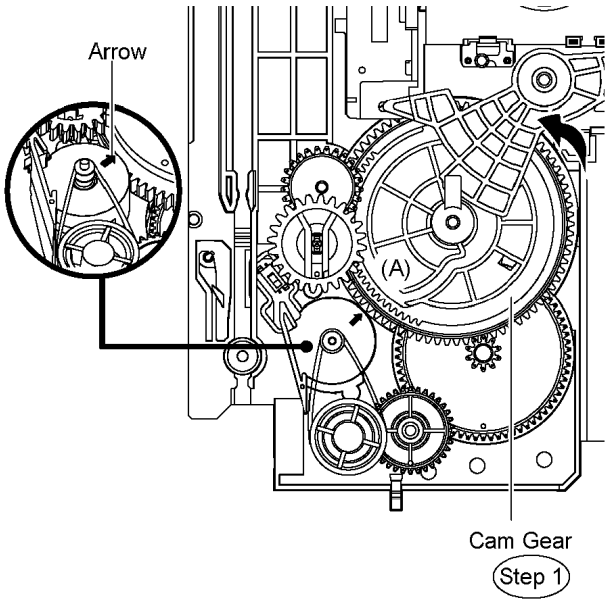


10.35. Disassembly of Support Piece, Change Lever, Slide Plate (L) & Slide Plate (R)

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.
- Follow (Step 1) to (Step 4) of Item 10.8.
- Follow (Step 1) to (Step 3) of Item 10.30.

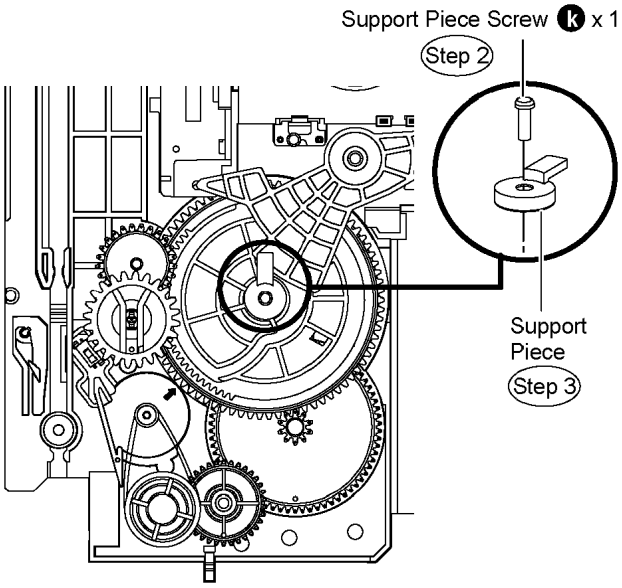
- Disassembly of Support Piece.

Step 1 Rotate the cam gear anti-clockwise. (Align at position (A) as marking on the gear with arrow.)



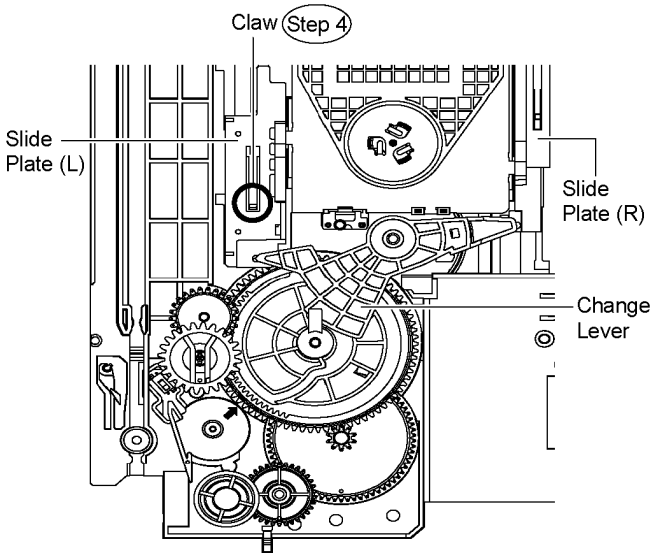
Step 2 Remove the support piece screw from the top of support piece.

Step 3 Remove support piece.

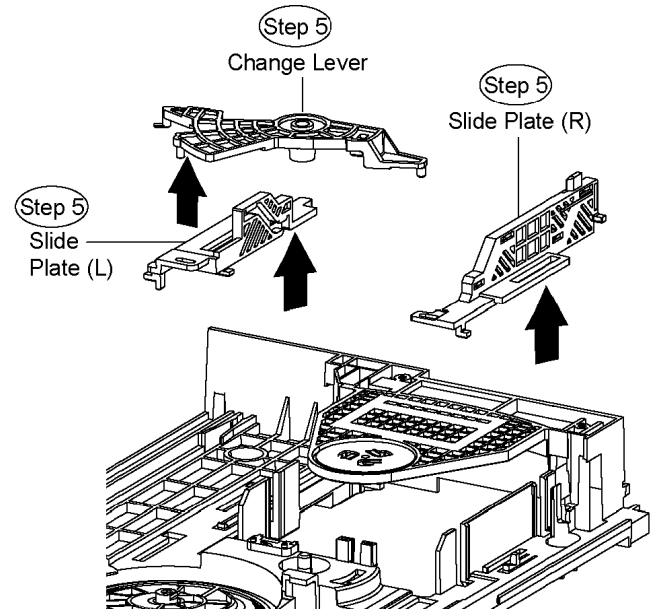


- Disassembly of Change Lever, Slide Plate (L) & Slide Plate (R).

Step 4 Press the claw and pull up the slide plate (L).



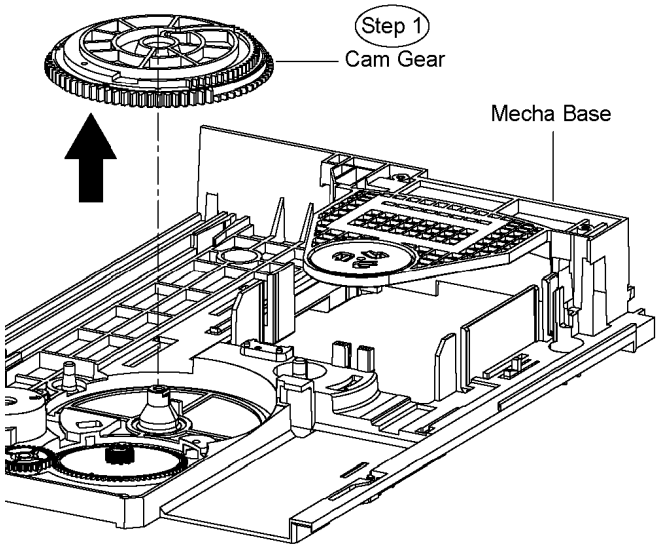
Step 5 Remove the change lever, slide plate (L) & slide plate (R) in the direction of arrow.



10.36. Disassembly of Cam Gear

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 3) of Item 10.4.
- Follow (Step 1) to (Step 4) of Item 10.5.
- Follow (Step 1) to (Step 4) of Item 10.7.
- Follow (Step 1) to (Step 4) of Item 10.8.
- Follow (Step 1) to (Step 3) of Item 10.30.
- Follow (Step 1) to (Step 2) of Item 10.33.
- Follow (Step 1) to (Step 5) of Item 10.35.

Step 1 Remove the cam gear from the mecha base in the arrow of direction.



10.37. Assembly of Tray Base Assembly

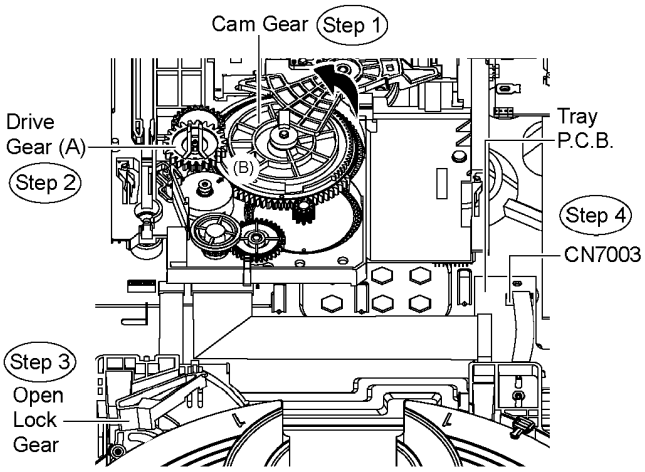
- Reverse (Step 1) to (Step 4) of Item 10.8.

Step 1 Rotate the cam gear anti-clockwise. (Align at position (B) as marking on gear with arrow.)

Step 2 Make sure drive gear (A) is in vertical position.

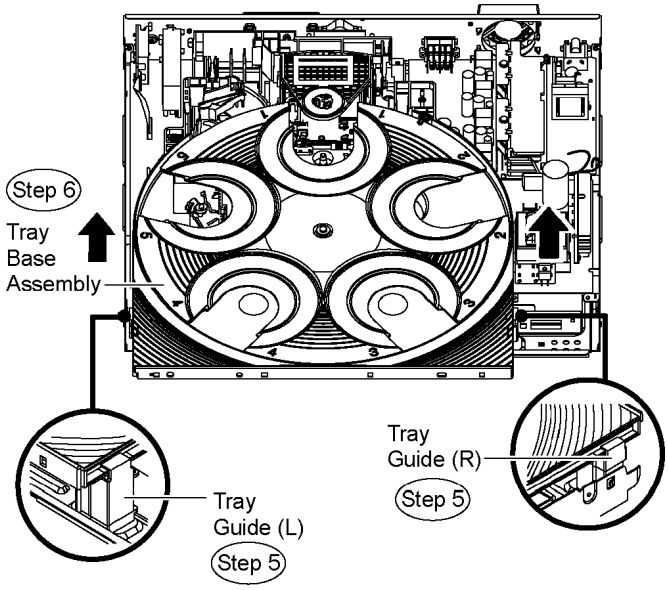
Step 3 Keep the open lock gear pressed in the position shown.

Step 4 Connect FFC cable at the connector (CN7003) on Tray P.C.B.



Step 5 Align the tray base assembly to the tray guide (L) & tray guide (R).

Step 6 Push the tray base assembly in the direction of arrow shown.



11 Service Fixture and Tools

Prepare service tools before proccess service position.

Service Tools	
Loading Motor P.C.B. - Main P.C.B.	REEX0633 (11 pin)

12 Service Positions

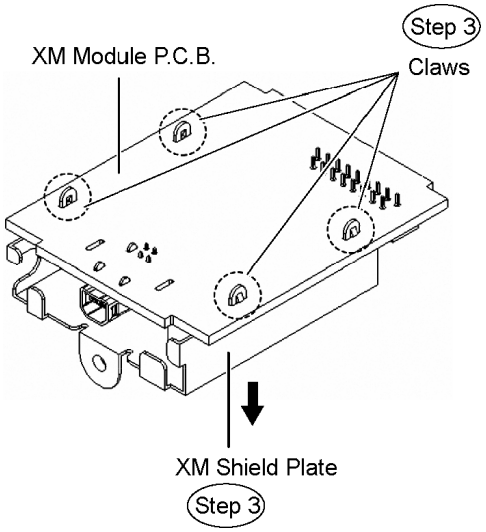
12.1. Checking & Repair XM Module P.C.B.

Step 1 Disassemble the top cabinet.

Step 2 Disassemble XM Module P.C.B.

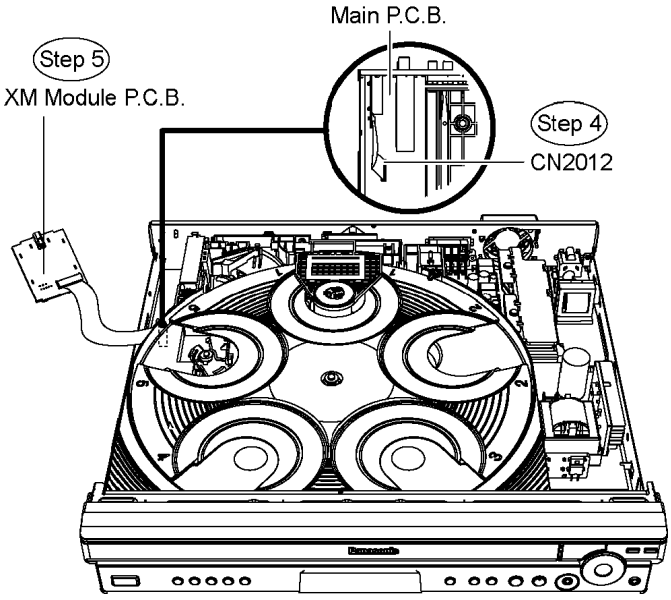
Note: Refer to items in Chapter 10 for disassembly procedures of respective Part & P.C.B.

Step 3 Desolder the the claws of the XM shield plate and then remove it from XM Module P.C.B. in the direction of arrow.



Step 4 Connect FFC cable at the connector (CN2012).

Step 5 Turn over XM Module P.C.B. and place it according to the diagram shown below.



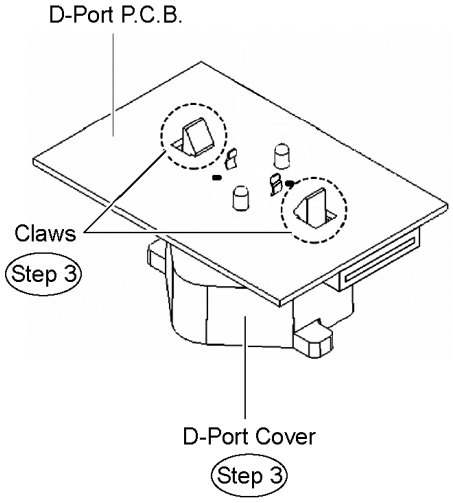
12.2. Checking & Repair D-Port P.C.B.

Step 1 Disassemble the top cabinet.

Step 2 Disassemble the rear panel.

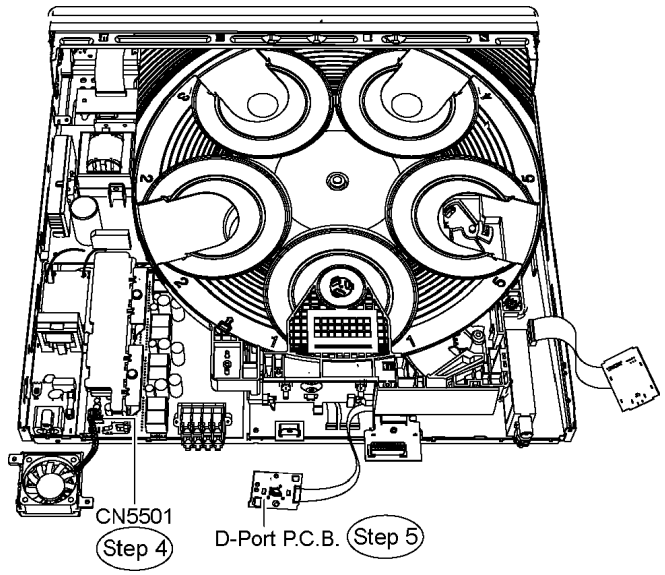
Note: Refer to items in Chapter 10 for disassembly procedures of respective Part & P.C.B.

Step 3 Remove the D-Port cover by releasing the claws from D-Port P.C.B.



Step 4 Connect FFC cable at the connector (CN5501).

Step 5 Turn over D-Port P.C.B. and place it according to the diagram shown below.



12.3. Checking & Repair Panel P.C.B. & Key P.C.B.

Step 1 Disassemble the top cabinet.

Step 2 Disassemble the tray lid assembly.

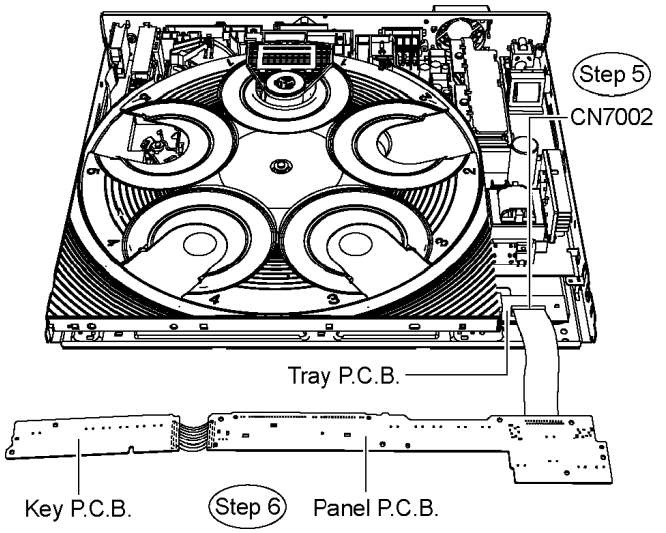
Step 3 Disassemble the front panel.

Step 4 Disassemble Panel & Key P.C.B.

Note: Refer to items in Chapter 10 for disassembly procedures of respective Part & P.C.B.

Step 5 Connect FFC cable at the connector (CN7002) on Tray P.C.B.

Step 6 Turn over Panel P.C.B. & Key P.C.B. horizontally and place them according to the diagram shown below.



12.4. Checking & Repair Main P.C.B.

・Disassembly of P.C.B. & Part

Step 1 Disassemble the top cabinet.

Step 2 Disassemble the tray lid assembly.

Step 3 Disassemble the front panel.

Step 4 Disassemble Panel & Key P.C.B.

Step 5 Disassemble the tray base assembly.

Step 6 Disassemble the mechanism base assembly.

Step 7 Disassemble the rear panel.

Step 8 Disassemble XM Module P.C.B.

Step 9 Disassemble Wireless Adapter P.C.B.

Step 10 Disassemble Tray P.C.B.

Step 11 Disassemble D-Amp P.C.B.

Step 12 Disassemble DVD Module P.C.B.

Step 13 Disassemble Main P.C.B.

Step 14 Disassemble SMPS & AC-Inlet P.C.B.

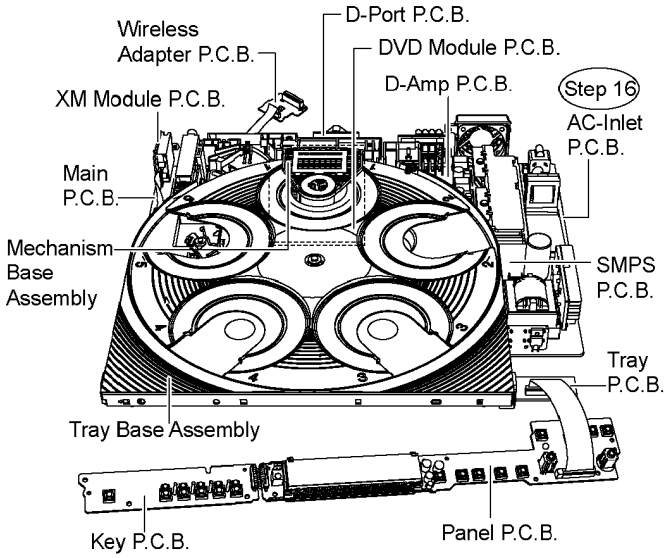
Step 15 Disassemble D-Port P.C.B.

Note: Refer to items in Chapter 10 for disassembly procedures of respective Part & P.C.B.

・Servicing Position of Main P.C.B.

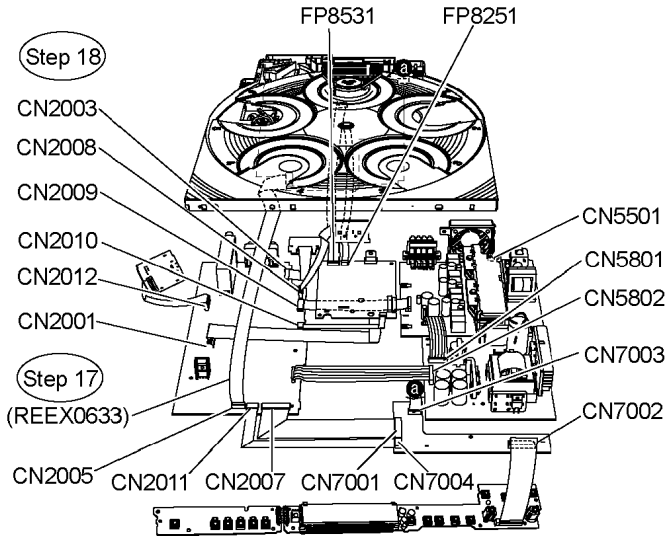
Step 16 Position the mechanism base assembly, tray base assembly, Panel & Key P.C.B., XM Module P.C.B., Wireless Adapter P.C.B., Tray P.C.B., D-Amp P.C.B., DVD Module P.C.B., Main P.C.B., D-Port P.C.B., SMPS & AC-Inlet P.C.B. according to the diagram shown below.

Note: Avoid the contact between the mechanism base assembly and the DVD Module P.C.B. by placing an object beneath the mechanism base assembly.



Step 17 Change cable (REEX0524) to extended cable (REEX0633).

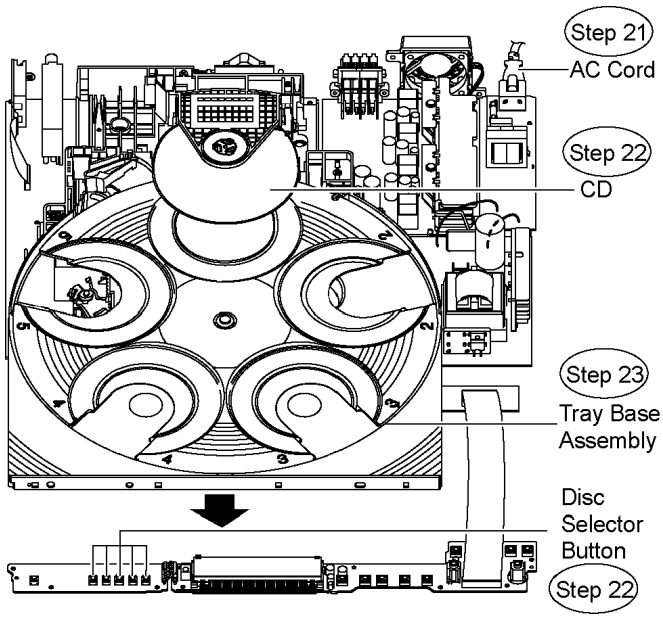
Step 18 Connect FFC cable at all the connectors. (CN2001, CN2003, CN2005 CN2007, CN2008, CN2009, CN2010, CN2011, CN2012, CN5501, CN5801, CN5802, CN7001, CN7002, CN7003, CN7004, FP8251 & FP8531)



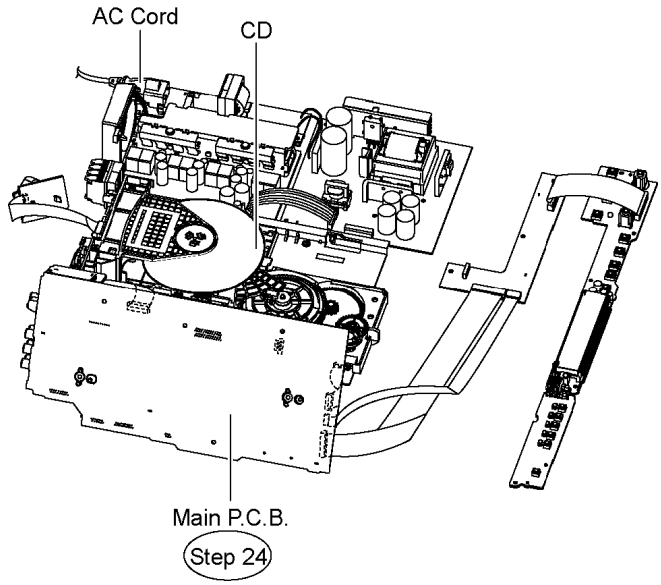
Step 21 Connect the AC cord and switch on the power.

Step 22 Place a CD/DVD onto the tray base assembly and play it by selecting one of the DISC SELECTOR button on Power Button P.C.B.

Step 23 While the CD/DVD is being played, remove the tray base assembly in the direction of arrow by repeating the (Step1) to (Step 4) of Item 10.7.



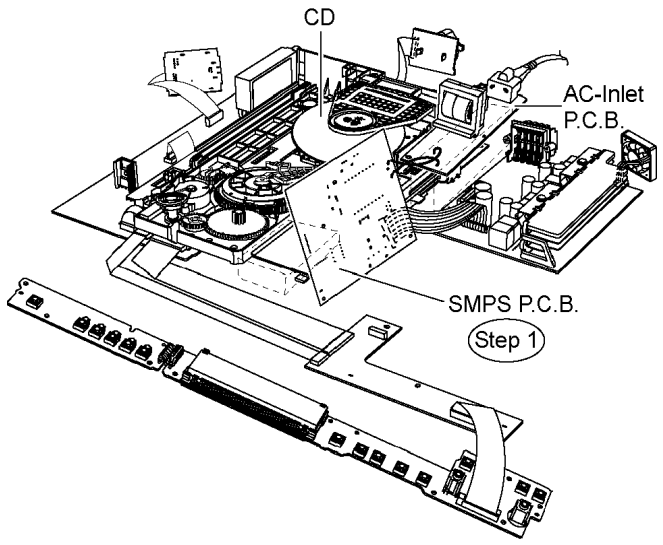
Step 24 Turn over Main P.C.B. vertically and place it according to the diagram shown below.



12.5. Checking & Repair SMPS P.C.B.

・Follow (Step 1) to (Step 23) of Item 12.4.

Step 1 Turn over SMPS P.C.B. vertically and place it according to the diagram shown below.



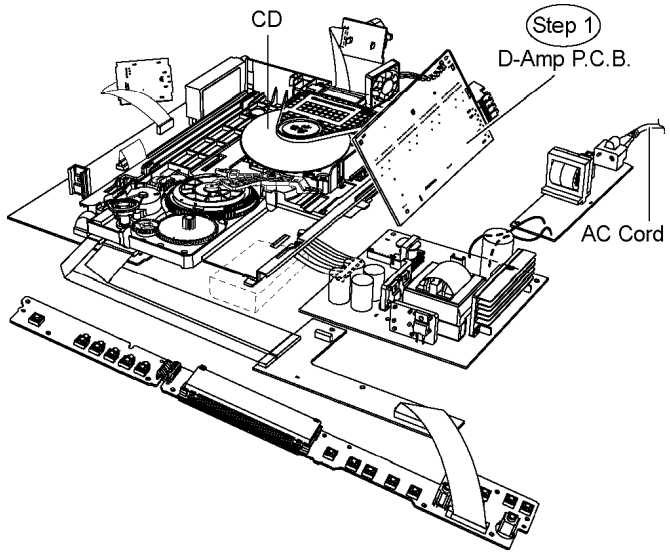
Note: AC-Inlet P.C.B can be placed on an object (eg. box) to avoid its contact with mechanism base assembly.

Caution: Be careful of power heatsinks located on SMPS P.C.B., which has high temperature after prolonged use, when servcing the P.C.B.

12.6. Checking & Repair D-Amp P.C.B.

・Follow (Step 1) to (Step 23) of Item 12.4.

Step 1 Turn over D-Amp P.C.B. vertically and place it according to the diagram shown below.

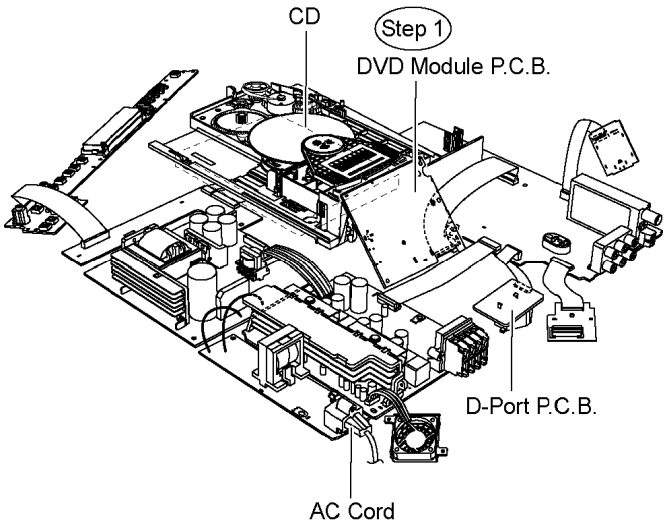


Caution: Be careful of power heatsink located on D-Amp P.C.B., which has high temperature after prolonged use, when servcing the P.C.B.

12.7. Checking & Repair DVD Module P.C.B.

・Follow (Step 1) to (Step 23) of Item 12.4.

Step 1 Turn over DVD Module P.C.B. vertically and place it according to the diagram shown below.


CD
Step 1
DVD Module P.C.B.
D-Port P.C.B.
AC Cord

13 Measurements and Adjustments

13.1. Service Tools and Equipment

Application	Name	Number
Tilt adjustment	DVD test disc	DVDT-S20 [SPG]
	TORX screw driver (T6)	Available on sales route. (T6) or RFKZ0185 [SPG]
Others	Grease	RFKXPG641 [SPG]
Confirmation	CD test disc	PVCD-K06 or any other commercially available disc
	VCD test disc	PVCD-K06 or any other commercially available disc
	Recovery disc	RFKZD03R005 [SPG]

13.2. Important points in adjustment

13.2.1. Important points in optical adjustment

・Before starting optical adjustment, be sure to take anti-static measures.

・Optical pickup tilt adjustment is needed after replacement of the following components.

1. Optical pickup unit
2. Spindle motor unit
3. Optical pickup peripheral parts

Notes

Adjustment is generally unnecessary after replacing other parts of the traverse unit. However, make adjustment if there is a noticeable degradation in picture quality. Optical adjustments cannot be made inside the optical pickup. Adjustment is generally unnecessary after replacing the traverse unit.

13.2.2. Important points in electrical adjustment

・Follow the adjustment procedures described in this manual.

13.3. Storing and handling of test discs

・Surface precision is vital for DVD test discs. Be sure to store and handle them carefully.

1. Do not place discs directly onto the workbench, etc., after use.
2. Handle discs carefully in order to maintain their flatness. Place them into their case after use and store them vertically. Store discs in a cool place where they are not exposed to direct sunlight or air from air conditioners.
3. Accurate adjustment will not be possible if the disc is warped when placed on a surface made of glass, etc. If this happens, use a new test disc to make optical adjustments.
4. If adjustment is done using a warped disc, the adjustment will be incorrect and some discs will not be playable.

13.4. Optical adjustment

13.4.1. Optical pickup tilt adjustment

Measurement point	Adjustment point	Mode	Disc
	Tangential adjustment screw Tilt adjustment screw	T01 (inner periphery) play T30 (center periphery) T43 (outer periphery) play	DVDT-S20 [SPG]
Measuring equipment		Adjustment value	
None (Main unit display for servicing is used.)		Adjust to the minimum jitter value.	

13.4.1.1. Adjustment procedure

1. While pressing STOP button on the main unit, press "5" on the remote control unit.
2. Confirm that "J_xxx/yyy_zz" (Display 1/Display 2) is shown on the front display.

   For your information:

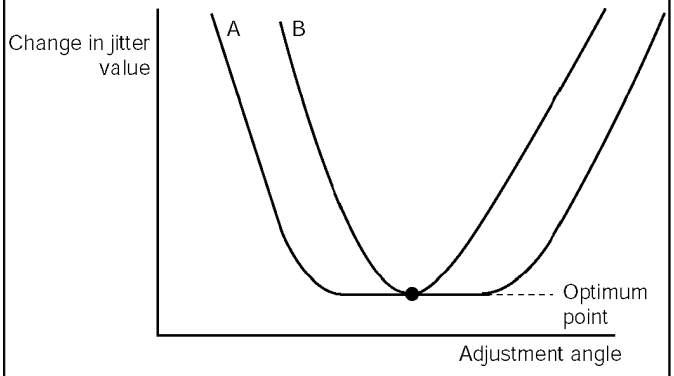
   "yyy" and "zz" have nothing to do with the jitter value. "yyy" is the error counter, while "zz" is the focus drive value.

   Note:

   Jitter value appears on the front display.
3. Play test disc T30 (center periphery).
4. Adjust tangential adjustment screw so that the jitter value is minimized.
5. Play test disc T30 (center periphery).
6. Adjust tilt adjustment screw 1 so that the jitter value is minimized.
7. Play test disc T30 (center periphery).
8. Adjust tilt adjustment screw 2 so that the jitter value is minimized.
9. Repeat adjusting tilt adjustment screws 1 and 2 alternately until the jitter value is minimized.

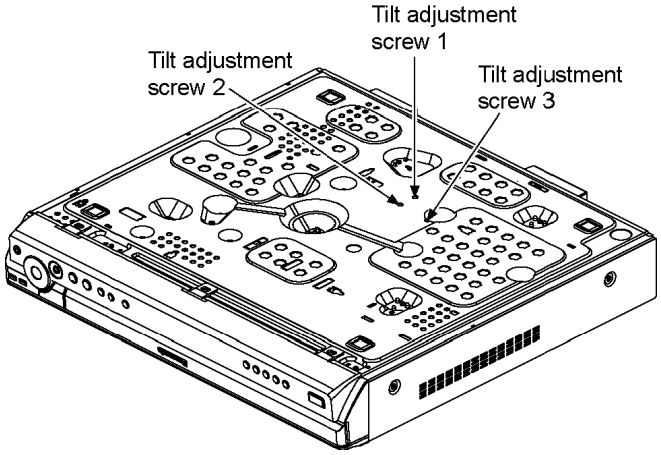
13.4.1.2. Important points

1. Make tangential adjustment first, and then make tilt adjustment.
2. Repeat adjusting two or three times to find the optimum point.
3. Finish the procedure with tilt adjustment.



Jitter value depends on the model:

1. If the jitter value changes like B, the optimum point is easy to find.
2. If the jitter value changes like A, set the optimum point near the middle.

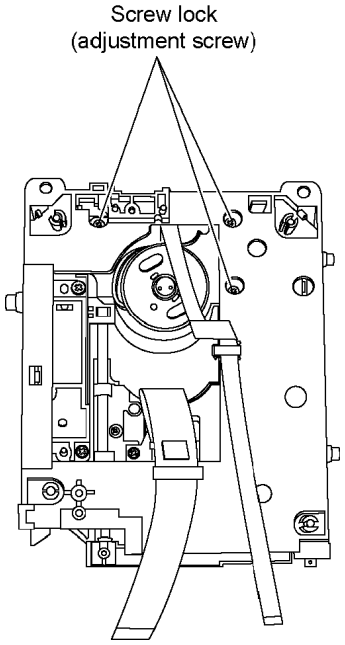


13.4.1.3. Check after adjustment

Play test disc or any other disc to make sure there is no picture degradation in the inner, middle and outer peripheries, and no audio skipping. After adjustment is finished, lock each adjustment screw in position using screw lock.

13.4.1.4. Procedure for screw lock

1. After adjustment, remove top cover, tray, clamper base and traverse unit in this sequence.
2. Lay the traverse unit upside down, and fix adjustment screw with screw lock.
3. After fixing, reassemble traverse unit, clamper base, tray and top cover.



14 Abbreviations

INITIAL/LOGO		ABBREVIATIONS
A	A0~UP	ADDRESS
	ACLK	AUDIO CLOCK
	AD0~UP	ADDRESS BUS
	ADATA	AUDIO PES PACKET DATA
	ALE	ADDRESS LATCH ENABLE
	AMUTE	AUDIO MUTE
	AREQ	AUDIO PES PACKET REQUEST
	ARF	AUDIO RF
	ASI	SERVO AMP INVERTED INPUT
	ASO	SERVO AMP OUTPUT
	ASYNC	AUDIO WORD DISTINCTION SYNC
B	BCK	BIT CLOCK (PCM)
	BCKIN	BIT CLOCK INPUT
	BDO	BLACK DROP OUT
	BLKCK	SUB CODE BLOCK CLOCK
	BOTTOM	CAP. FOR BOTTOM HOLD
	BYP	BYPATH
	BYTCK	BYTE CLOCK
C	CAV	CONSTANT ANGULAR VELOCITY
	CBDO	CAP. BLACK DROP OUT
	CD	COMPACT DISC
	CDSCK	CD SERIAL DATA CLOCK
	CDSRDATA	CD SERIAL DATA
	CDRF	CD RF (EFM) SIGNAL
	CDV	COMPACT DISC-VIDEO
	CHNDATA	CHANNEL DATA
	CKSL	SYSTEM CLOCK SELECT
	CLV	CONSTANT LINEAR VELOCITY
	COFTR	CAP. OFF TRACK
	CPA	CPU ADDRESS
	CPCS	CPU CHIP SELECT
	CPDT	CPU DATA
	CPUADR	CPU ADDRESS LATCH
	CPUADT	CPU ADDRESS DATA BUS
	CPUIRQ	CPU INTERRUPT REQUEST
	CPRD	CPU READ ENABLE
	CPWR	CPU WRITE ENABLE
	CS	CHIP SELECT
	CSYNCIN	COMPOSITE SYNC IN
	CSYNCOUT	COMPOSITE SYNC OUT
D	DACCK	D/A CONVERTER CLOCK
	DEEMP	DEEMPHASIS BIT ON/OFF
	DEMPH	DEEMPHASIS SWITCHING
	DIG0~UP	FL DIGIT OUTPUT
	DIN	DATA INPUT
	DMSRCK	DM SERIAL DATA READ CLOCK
	DMUTE	DIGITAL MUTE CONTROL
	DO	DROP OUT
	DOUT0~UP	DATA OUTPUT
	DRF	DATA SLICE RF (BIAS)
	DRPOUT	DROP OUT SIGNAL
	DREQ	DATA REQUEST
	DRESP	DATA RESPONSE
	DSC	DIGITAL SERVO CONTROLLER
	DSLF	DATA SLICE LOOP FILTER
	DVD	DIGITAL VIDEO DISC

INITIAL/LOGO		ABBREVIATIONS
E	EC	ERROR TORQUE CONTROL
	ECR	ERROR TORQUE CONTROL REFERENCE
	ENCSEL	ENCODER SELECT
	ETMCLK	EXTERNAL M CLOCK (81MHz/40.5MHz)
	ETSCLK	EXTERNAL S CLOCK (54MHz)
F	FBAL	FOCUS BALANCE
	FCLK	FRAME CLOCK
	FE	FOCUS ERROR
	FFI	FOCUS ERROR AMP INVERTED INPUT
	FEO	FOCUS ERROR AMP OUTPUT
	FG	FREQUENCY GENERATOR
	FSC	FREQUENCY SUB CARRIER
	FSCK	FS (384 OVER SAMPLING) CLOCK
G	GND	COMMON GROUNDING (EARTH)
H	HA0~UP	HOST ADDRESS
	HD0~UP	HOST DATA
	HINT	HOST INTERRUPT
	HRXW	HOST READ/WRITE
I	IECOUT	IEC958 FORMAT DATA OUTPUT
	IPFRAG	INTERPOLATION FLAG
	IREF	I (CURRENT) REFERENCE
	ISEL	INTERFACE MODE SELECT
L	LDON	LASER DIODE CONTROL
	LPC	LASER POWER CONTROL
	LRCK	L CH/R CH DISTINCTION CLOCK
M	MA0~UP	MEMORY ADDRESS
	MCK	MEMORY CLOCK
	MCKI	MEMORY CLOCK INPUT
	MCLK	MEMORY SERIAL COMMAND CLOCK
	MDATA	MEMORY SERIAL COMMAND DATA
	MDQ0~UP	MEMORY DATA INPUT/OUTPUT
	MDQM	MEMORY DATA I/O MASK
	MLD	MEMORY SERIAL COMMAND LOAD
	MPEG	MOVING PICTURE EXPERTS GROUP
O	ODC	OPTICAL DISC CONTROLLER
	OFTR	OFF TRACKING
	OSCI	OSCILLATOR INPUT
	OSCO	OSCILLATOR OUTPUT
	OSD	ON SCREEN DISPLAY
P	P1~UP	PORT
	PCD	CD TRACKING PHASE DIFFERENCE
	PCK	PLL CLOCK
	PDVD	DVD TRACKING PHASE DIFFERENCE
	PEAK	CAP. FOR PEAK HOLD
	PLLCLK	CHANNEL PLL CLOCK
	PLLOK	PLL LOCK
	PWMCTL	PWM OUTPUT CONTROL
	PWMDA	PULSE WAVE MOTOR DRIVE A
	PWMOA, B	PULSE WAVE MOTOR OUT A, B

INITIAL/LOGO		ABBREVIATIONS
R	RE	READ ENABLE
	RFENV	RF ENVELOPE
	RFO	RF PHASE DIFFERENCE OUTPUT
	RS	(CD-ROM) REGISTER SELECT
	RSEL	RF POLARITY SELECT
	RST	RESET
	RSV	RESERVE
S	SBI0, 1	SERIAL DATA INPUT
	SBO0	SERIAL DATA OUTPUT
	SBT0, 1	SERIAL CLOCK
	SCK	SERIAL DATA CLOCK
	SCKR	AUDIO SERIAL CLOCK RECEIVER
	SCL	SERIAL CLOCK
	SCLK	SERIAL CLOCK
	SDA	SERIAL DATA
	SEG0~UP	FL SEGMENT OUTPUT
	SELCLK	SELECT CLOCK
	SEN	SERIAL PORT ENABLE
	SIN1, 2	SERIAL DATA IN
	SOUT1, 2	SERIAL DATA OUT
	SPDI	SERIAL PORT DATA INPUT
	SPDO	SERIAL PORT DATA OUTPUT
	SPEN	SERIAL PORT R/W ENABLE
	SPRCLK	SERIAL PORT READ CLOCK
	SPWCLK	SERIAL PORT WRITE CLOCK
	SQCK	SUB CODE Q CLOCK
	SQCX	SUB CODE Q DATA READ CLOCK
	SRDATA	SERIAL DATA
	SRMADR	SRAM ADDRESS BUS
	SRMDT0~7	SRAM DATA BUS 0~7
	SS	START/STOP
	STAT	STATUS
	STCLK	STREAM DATA CLOCK
	STD0~UP	STREAM DATA
	STENABLE	STREAM DATA INPUT ENABLE
	STSEL	STREAM DATA POLARITY SELECT
	STVALID	STREAM DATA VALIDITY
	SUBC	SUB CODE SERIAL
	SBCK	SUB CODE CLOCK
	SUBQ	SUB CODE Q DATA
	SYSCLK	SYSTEM CLOCK
T	TE	TRACKING ERROR
	TIBAL	BALANCE CONTROL
	TID	BALANCE OUTPUT 1
	TIN	BALANCE INPUT
	TIP	BALANCE INPUT
	TIS	BALANCE OUTPUT 2
	TPSN	OP AMP INPUT
	TPSO	OP AMP OUTPUT
	TPSP	OP AMP INVERTED INPUT
	TRCRS	TRACK CROSS SIGNAL
	TRON	TRACKING ON
	TRSON	TRAVERSE SERVO ON

INITIAL/LOGO		ABBREVIATIONS
V	VBLANK	V BLANKING
	VCC	COLLECTOR POWER SUPPLY VOLTAGE
	VCDCONT	VIDEO CD CONTROL (TRACKING BALANCE)
	VDD	DRAIN POWER SUPPLY VOLTAGE
	VFB	VIDEO FEED BACK
	VREF	VOLTAGE REFERENCE
	VSS	SOURCE POWER SUPPLY VOLTAGE
W	WAIT	BUS CYCLE WAIT
	WDCK	WORD CLOCK
	WEH	WRITE ENABLE HIGH
	WSR	WORD SELECT RECEIVER
X	X	X´ TAL
	XALE	X ADDRESS LATCH ENABLE
	XAREQ	X AUDIO DATA REQUEST
	XCDROM	X CD ROM CHIP SELECT
	XCS	X CHIP SELECT
	XCSYNC	X COMPOSITE SYNC
	XDS	X DATA STROBE
	XHSYNCO	X HORIZONTAL SYNC OUTPUT
	XHINT	XH INTERRUPT REQUEST
	XI	X´ TAL OSCILLATOR INPUT
	XINT	X INTERRUPT
	XMW	X MEMORY WRITE ENABLE
	XO	X´ TAL OSCILLATOR OUTPUT
	XRE	X READ ENABLE
	XSRMCE	X SRAM CHIP ENABLE
	XSRMOE	X SRAM OUTPUT ENABLE
	XSRMWE	X SRAM WRITE ENABLE
	XVCS	X V-DEC CHIP SELECT
	XVDS	X V-DEC CONTROL BUS STROBE
	XVSYNCO	X VERTICAL SYNC OUTPUT

15 Voltage and Waveform Chart

15.1. DVD Module P.C.B.

Ref No.	IC3901																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	-	-	-	-	1.3	1.4	0	2.9	3.4	0	0	0.2	3.4	0	0	0	3.4	0	0	0
Ref No.	IC3901																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	3.4	0	0	0	3.4	1.3	0	3.4	-	-	-	-	1.6	3.4	0.9	0.1	0.1	0.9	0	3.4
Ref No.	IC3901																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	1.7	1.3	1.7	0	1.7	0	1.3	0	0	0	0	3.4	0	0	1.3	0	0	0	0	0
Ref No.	IC3901																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	0	0	0	-	-	0	0	0	0	3.4	0	0	0	0	1.3	0	0	0	0	0
Ref No.	IC3901																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0	0	0	3.4	1.3	0	1.0	0.7	0.8	2.3	0	1.3	1.3	1.8	1.2	-	-	-	0	3.4
Ref No.	IC3901																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
CD PLAY	0	1.3	0	0	0	3.4	3.4	3.4	1.3	0	1.8	0	3.3	3.2	3.4	1.3	1.6	0	0	3.4
Ref No.	IC3901																			
MODE	121	122	123	124	125	126	127	128												
CD PLAY	3.4	0	1.3	3.4	0	1.6	-	-												
Ref No.	IC3952																			
MODE	1	2	3	4	5															
CD PLAY	8.5	0	1.3	5.1	8.9															
Ref No.	IC8001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0.1	0	0.1	0.1	0	3.3	0.1	0.1	1	0.6	0.8	2.3	1.3	1.3	0	3.3	1.8	1.2	0	1.2
Ref No.	IC8001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0.7	1.1	0.8	16.5	1.1	1.6	2.3	1.3	1.7	1.2	3.3	0	3.3	1.6	0.6	1.6	1.5	1.6	1.7	1.7
Ref No.	IC8001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	2	2	0	1.2	0.1	3.2	3.3	3.3	3.3	1.6	0	3.3	2.7	2.7	3	3.3	3.3	2.9	0	1.7
Ref No.	IC8001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	1.6	0.1	0.1	0.9	0.1	1.9	1.6	0	3.3	3.3	0.1	3.3	3.3	0.1	3.3	0.1	0.1	0.1	3.3	0.1
Ref No.	IC8001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0.1	0	1.2	3.3	0.9	2.4	0.1	1.9	0.1	0.3	1.8	3.3	1.5	1.5	1.8	1.8	1.7	1.7	1.7	1.7
Ref No.	IC8001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
CD PLAY	0	0	0.4	0.1	0.2	1.9	3.3	0.1	2.2	1.7	2.6	2.6	2.6	2.6	2.7	2.7	2.4	2.5	2.5	2.5
Ref No.	IC8001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
CD PLAY	1.9	1.9	1.7	1.7	0.1	1.7	1.8	3.4	0.9	0.9	0.4	3.3	2.4	1	1	2.4	0	0.4	0.9	0
Ref No.	IC8001																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
CD PLAY	3.4	3.4	0	0.8	0	0.8	3.4	1.6	1.7	1.7	0.9	1.7	0	3.4	-	1.6	0	-	-	-
Ref No.	IC8001																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
CD PLAY	2.8	3.1	2.7	2.9	0	3.2	3	2.9	3.0	3.1	2.9	2.9	0	3.3	3.2	3.0	2.9	2.9	2.6	2.6
Ref No.	IC8001																			
MODE	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
CD PLAY	3.3	0	1.6	3.3	1.6	0	1.3	3.3	3.3	3.3	3.3	0.1	1.5	0.1	0	3.2	1.5	0	0	1.5
Ref No.	IC8001																			
MODE	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216				
CD PLAY	0.1	1.5	0.1	0	3.1	1.5	0.1	1.5	1.3	0	1.2	2.6	2.6	2.8	3.2	3.2				
Ref No.	IC8051																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.3	2.9	3.3	3.1	3.0	0.1	3.1	3.3	3.3	3	3	0	2.9	3.3	2.6	3.3	3.2	3.2	3.1	1.8
Ref No.	IC8051																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	1.6	0.1	0.1	0.2	0.2	1.4	3.3	0	1.6	1.6	1.7	1.6	0.1	0.1	0.1	-	3.3	1.6	2.6	-
Ref No.	IC8051																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54						
CD PLAY	0	2.9	3.3	3.1	3	0	2.9	3.2	3.3	2.8	2.8	0	3.0	0						
Ref No.	IC8111																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	3.2	-	0	-	4.6	-	-	5												
Ref No.	IC8151																			
MODE	1	2	3	4	5															
CD PLAY	2.5	2.5	0	1.3	0.8															
Ref No.	IC8251																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.7	1.7	1.7	2.2	2.2	1.8	0	5.1	3.3	0	2.4	2.8	2.6	2.6	4.1	4.3	4.8	3.7	0	3.3
Ref No.	IC8251																			
MODE	21	22	23	24	25	26	27	28	29	30										
CD PLAY	8.9	8.8	1.7	1.7	1.7	1.7	3.3	5.1	0	0										
Ref No.	IC8421																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	3.3	2.9	3.3	1.6	0.9	1.7	1.7	5.2	0	0.9	0.1	0.1	0	2.5	2.5	5.2	0	2.5	2.5
Ref No.	IC8421																			
MODE	21	22	23	24	25	26	27	28												
CD PLAY	2.5	2.5	5.2	0	2.6	2.5	2.6	5.1												

Ref No.	IC8601																			
MODE	1	2	3	4																
CD PLAY	1.2	3.3	0	0																
Ref No.	IC8606																			
MODE	1	2	3	4	5															
CD PLAY	3.3	3.3	0	0	-															
Ref No.	IC8611																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	0	3.2	3.3	0	3.3												
Ref No.	IC8651																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.1	1.0	1.8	1.0	1.7	2.3	1.3	1.8	1.2	0.1	3.3	3.3	3.3	3.3	1.6	1.6	0.6	1.2	1.5	1.7
Ref No.	IC8651																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	1.8	1.8	2	1.9	0	2	0	2.5	1.7	1.1	0.8	1.6	1.0	1.6	2.3	1.4	3.3	1.7	1.1	1.4
Ref No.	IC8651																			
MODE	41	42	43	44	45	46	47	48												
CD PLAY	1.6	1.7	1.7	2	1.9	0	3.3	0.8												
Ref No.	IC8691						IC8695						IC8701							
MODE	1	2	3	4	5		1	2	3	4	5		1	2	3	4	5			
CD PLAY	3	3	0	4.6	5.1		2.7	2.7	0	4.2	5.1		-	1.5	0	1.7	3.3			
Ref No.	IC8901																			
MODE	1	2	3	4	5															
CD PLAY	3.3	3.3	0	3.4	3.4															
Ref No.	IC9001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0.1	2.7	1.8	2	1.7	1.7	1.6	1.5	1.1	0	2	1.1	1.5	1.7	1.8	1.8	2	1.9	2.3	3.3
Ref No.	IC9002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0.1	1.7	1.3	2.2	1.7	1.0	1.6	0.8	1.1	0	2	1	0.9	1.8	1	1.7	2.3	1.3	1.8	3.3
Ref No.	Q3901				Q3902				Q3903				Q3941				Q3942			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0.1	4.2	-0.5		3.4	5.1	3.4		3.4	5.1	3.4		3.6	3.5	3.6		0	3.5	0	
Ref No.	Q3943				Q8321				Q8325				Q8331				Q8335			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	4	5.6	4.3		1.1	0	0.4		1.5	0	0.9		1.1	0	0.4		1.6	0	0.9	
Ref No.	Q8341				Q8551				Q8552				Q8561				Q8562			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	1.5	0	0.9		0.1	5.1	0.1		5.1	0	5.1		1.3	3.9	1.9		4.5	2.3	3.9	
Ref No.	QR8111							QR8420				QR8571								
MODE	1	2	3	4	5	6		E	C	B		E	C	B						
CD PLAY	0	0	1.3	0.1	0.1	4.8		0	4.3	0.1		3.4	3.3	0.1						

SA-PT950P/PC DVD MODULE P.C.B.

15.2. Main P.C.B.

Ref No.	IC2001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	4.9	4.9	4.8	4.9	4.9	0	1.6	0	0	5	0	4.9	2.5	0	2.4	4.9	4.9	4.9	3.2	5
STANDBY	0	0	4.8	5	4.9	0	1.9	0	0	4.9	0	4.9	2.5	0	2.4	5	5	4.9	3.2	5
Ref No.	IC2001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	5	0	0	0	0	0	0	0	0	0	2	4.9	0	4.9	1.7	1	5	5	5	0
STANDBY	5	4.9	0	0	0	5	4.9	4.6	4.3	0	4.9	5	4.9	5	5	5	5	5	5	5
Ref No.	IC2001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0	0	0	0	5	4.9	0	0	0	4.9	1.1	0	1.1	4.8	4.8	5	0	0	0	1.4
STANDBY	0	5.2	4.8	0	5	0	5	0	0.1	0	0	0	0	5	5	5	4.9	4.9	0	1.9
Ref No.	IC2001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	0	4.9	0.6	0	0	0	0	0	0	0	0	0	0	4.8	5.5	0	0	0	0	1
STANDBY	0	5	5	0	5	0	0	4.9	4.9	0	4.9	4.9	0	4.8	5.5	5	5	4.8	4.9	5
Ref No.	IC2001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	1.6	5	0	0	0	0	0	1.5	0.4	2	5	0	5	0.4	0	0	2.9	5	4.9	0
STANDBY	2.2	5	0	0	0	0	4.9	2.1	0.4	2	5	0	5	0.4	0	0	3	5	5	0
Ref No.	IC2002																			
MODE	1	2	3	4	5	6	7	8	9											
CD PLAY	0	0	0	0	8.7	8.9	4.8	0	4.8											
STANDBY	0	0	0	0	8.7	8.9	4.9	0	4.9											
Ref No.	IC2003																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	-	5	0	0	0	0	0	-												
STANDBY	-	5	0	0	0	0	0	-												
Ref No.	IC2101																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0
Ref No.	IC2101																			
MODE	21	22	23	24	25	26	27	28		30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0.1	0.1	0	0	0	0	0	0	-0.1	0	0	0	0	0	0	0	0	0	0	0
STANDBY	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC2101																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0	-	0	0	0	0	0	0.1	0.1	4.9	0	0	0	0	0	0	0	0	0	-0.1
STANDBY	0	-	0	0	0	0	0	0.1	0.1	4.9	0	0	0	0	0	0	0	0	0	-0.1
Ref No.	IC2101																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	0	4.9	0	5.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STANDBY	0	5	0	5.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC2101																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0	0	-7.1	7.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STANDBY	0	0	-7.1	7.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC2102																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	-7	0	0	0	7												
STANDBY	0	0	0	-7.1	0	0	0	7												
Ref No.	IC2104																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	-7.1	0	0	0	7.0												
STANDBY	0	0	0	0.4	0	0	0	0.1												
Ref No.	IC2105																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
CD PLAY	0	0	0	0	0	0	-7.1	0	4.9	4.9	0	0	0	0	0	7				
STANDBY	0	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0	0.1				
Ref No.	IC2751																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	-5.6	1.1	0	-7.1	0	2.5	-5.6	5.1												
STANDBY	-5.6	1.1	0	-7.1	0	2.5	-5.6	5.1												
Ref No.	IC2801																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	5.1	0	0	2.2	4.9	1.6	0	1.6	2.2	0	1.6	0	2.2	4.9	2.2	5.1	2.3	2.3	0	2.3
STANDBY	4.8	0	0	2.2	4.9	1.7	0	1.7	2.2	0	1.7	0	2.1	4.7	2.0	4.9	2.1	2.1	0	2.2
Ref No.	IC2801																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
CD PLAY	2.3	0	1.4	1.7	0	1.4	1.4	0	1.5	1.7	0	2.3								
STANDBY	2.2	0	1.3	1.6	0	1.3	1.3	0	1.4	1.6	0	2.2								
Ref No.	IC2900						IC2901				IC2902									
MODE	1	2	3	4	5		1	2	3		1	2	3	4	5	6				
CD PLAY	16.6	8.9	0	1.0	16		8.9	0	5.1		5.2	0	3.3	-	0	5.2				
STANDBY	16.9	8.9	0	1.0	16.1		8.9	0	5.1		5.2	0	3.3	-	0	5.2				
Ref No.	IC2903																			
MODE	1	2	3	4	5															
CD PLAY	16.6	5.3	0	1	16.1															
STANDBY	16.9	5.3	0	0	16.3															

Ref No.	Q2001				Q2003				Q2006				Q2010				Q2011			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	4.8	4.7	4.8		0	4.9	0		0	0	4.3		0	0	1.8		3.3	4.9	4.0	
STANDBY	-7.1	-9.8	-7.7		0	4.9	0		0	5.2	0		0	0	1.8		3.3	5	4.0	
Ref No.	Q2012				Q2013				Q2095				Q2096				Q2097			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	1.8		3.3	5	4.1		5.2	5.1	0		0	5.5	0.1		0	0.1	0.6	
STANDBY	0	0	1.8		3.3	5	4.1		5.2	5.1	0		0	5.5	0.1		0	0	0.6	
Ref No.	Q2101								Q2201				Q2801				Q2900			
MODE	1	2	3	4	5	6		E	C	B		E	C	B		E	C	B		
CD PLAY	0	-4.7	0	0	-4.7	0		0	-4.7	0		0	4.9	0		0	16.7	-0.6		
STANDBY	0	0.7	0	0	0.7	0		1.9	1.9	0		0	4.9	0		0	16.8	-0.6		
Ref No.	Q2901				Q2902				Q2903				Q2904				Q2909			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	-7.1	-9.9	-7.7		0	-7.7	-0.6		7.1	8.9	7.7		2.5	4.6	3.2		0	4.8	-0.6	
STANDBY	-7	-10	-7.7		0	-7.7	-0.6		7.1	8.9	7.7		2.6	4.6	3.2		0	4.8	-0.6	
Ref No.	Q2915				Q2919				Q2921				Q2922				Q2923			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	4.9		0	4.8	0.2		5.2	0	5.1		0	4.8	0		0	0	2.1	
STANDBY	0	0	4.9		0	4.8	0.3		5.2	0	5.1		0	4.8	0		0	0	2.1	
Ref No.	Q2924																			
MODE	E	C	B																	
CD PLAY	0	4.8	0																	
STANDBY	0	4.8	0																	

SA-PT950P/PC MAIN P.C.B.

15.3. D-Amp P.C.B.

Ref No.	IC5000																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.5	0	0	29.1	0	-29.2	-21.2	29.4	10.8	-0.1	-29.4	-17.3	-29.4	-0.1	10.8	29.4	-29.2	-29.2	0	29.1
STANDBY	2.5	0	0	29.1	0	-29.2	-21.2	29.4	11	-0.1	-29.4	-17.2	-29.4	-0.1	11	29.4	-29.2	-29.2	0	29.1
Ref No.	IC5000																			
MODE	21	22	23																	
CD PLAY	0	0	2.6																	
STANDBY	0	0	2.5																	
Ref No.	IC5200																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.5	0	0	27.9	0	-29.2	-28.3	29.4	0	0	-29.4	-29.4	-29.4	0	0	29.4	-29.2	-29.2	0	27.9
STANDBY	2.5	0	0	29.1	0	-29.2	-21.3	29.4	11.1	0	-29.4	-17.1	-29.4	0.1	11	-29.4	-29.2	-29.2	29.1	0
Ref No.	IC5200																			
MODE	21	22	23																	
CD PLAY	0	0	2.6																	
STANDBY	0	0	2.6																	
Ref No.	IC5300																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.54	0	0	29.1	0	-29.2	-21	29.4	10.8	-0.1	-29.4	-17.3	-29.4	-0.1	10.8	29.4	-29.2	-29.2	0	29.1
STANDBY	2.5	0	0	29.1	0	-29.1	-21.2	29.4	11	-0.1	-29.4	-17.2	-29.4	0	11	29.4	-29.2	-29.2	0	29.1
Ref No.	IC5300																			
MODE	21	22	23																	
CD PLAY	0	0	2.6																	
STANDBY	0	0	2.5																	
Ref No.	IC5400																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.5	0	0	29.1	0	-29.2	-21.2	29.4	11.3	-0.1	-29.4	-16.8	-29.4	-0.1	11.3	29.4	-29.2	-29.2	0	29.1
STANDBY	2.5	0	0	29.1	0	-29.2	-21.3	29.4	11.1	-0.1	-29.4	-17	-29.4	-0.1	11.1	29.4	-29.2	-29.2	0	29.1
Ref No.	IC5400																			
MODE	21	22	23																	
CD PLAY	0	0	2.6																	
STANDBY	0	0	2.5																	
Ref No.	IC5500																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	0	5.3	4.8	0	2.5	2.5	0	2.6	2.6	2.6	2.5	0	5.3	5.3						
STANDBY	0	5	4.6	0	2.4	2.4	0	2.5	2.5	2.5	2.4	0	5.1	5.2						
Ref No.	IC5501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	2.5	2.6	2.6	0	2.6	0	0	0	0	0	0	0	5.3	5.3						
STANDBY	2.5	2.7	2.6	0	2.7	0	0	0	0	0	0	0	5.2	5.2						
Ref No.	Q5101				Q5102				Q5601				Q5602				Q5603			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	5	0		0	5	0		0.7	0	0		0.7	0	0		5.3	5.2	4.6	
STANDBY	0	5	0		0	5	0		0.7	0	0		0.7	0	0		5.3	5.2	4.6	
Ref No.	Q5604				Q5640				Q5641				Q5642				Q5644			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	0.7		7	16.9	7.6		0	5	0		0	0	0.7		0	3.9	0.4	
STANDBY	0	0	0.7		7	16.9	7.6		0	5	0		0	0.1	0.7		0	3.8	0.2	

SA-PT950P/PC D-AMP P.C.B.

15.4. SMPS P.C.B.

Ref No.	IC5701						IC5799									IC5801				
MODE	1	2	3	4	5		1	2	3	4	5	6	7	8		1	2	3		
CD PLAY	1.6	0	160	17.4	0		5.9	1.7	1.7	19.3	160	-	0	0		-26.8	-2.0	-29.4		
STANDBY	1.6	0	160	17.4	0		5.9	1.7	1.7	19.3	159	-	0	0		-26.8	-2.0	-29.4		
Ref No.	Q5720				Q5721				Q5722				Q5802				Q5803			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	7.5	10.2	7		18.1	18	17.4		0.2	17.9	0		-21.8	-2	-21.9		0	29.4	0	
STANDBY	7.6	10.3	7.1		18.1	18.1	17.4		0.1	17.7	0		-21.8	-2	-21.9		0	29.4	0	
Ref No.	Q5860				Q5861				Q5862				Q5898				Q5899			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0.7	0	1.3		0	0.1	0.7		0	5.2	0.1		0.4	3.2	0		3.5	4.3	4.1	
STANDBY	0.7	0	1.3		0	0.1	0.7		0	5	0.1		0.4	3.2	0		3.5	4.3	4.1	
Ref No.	QR5801				QR5810															
MODE	E	C	B		E	C	B													
CD PLAY	0	5.2	2.7		0	0.1	4.9													
STANDBY	0	5	-2.5		0	0.1	4.7													

SA-PT950P/PC SMPS P.C.B.

15.5. XM Module P.C.B.

Ref No.	IC1																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.3	0	3.3	3.3	3.1	0	0.3	3.3	0	0	3.3	0	3.3	0	3.3	0	3.3	1.3	1.3	3.3
STANDBY	3.3	0	3.3	3.3	3.2	0	0.2	3.3	0	0	3.3	0	3.3	0	3.3	0	3.3	1.3	1.3	3.3
Ref No.	IC1																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	1.3	1.3	0	0	1.3	3.3	1.2	0.3	0	0	0	3.3	0	3.2	3.3	0	0	1.7	3.3
STANDBY	1.3	1.3	1.3	0	0	1.3	3.3	1.2	0.2	0	0	0	3.3	0	3.2	3.3	0	0	1.7	3.3
Ref No.	IC1																			
MODE	41	42	43	44	45	46	47	48												
CD PLAY	1.7	0	1.7	3.3	0.3	3.3	0.3	0												
STANDBY	1.7	0	1.7	3.3	0.2	3.3	0.2	0												
Ref No.	IC2																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	5.2	5.2	0	1.8	5.2	5.2	5.2												
STANDBY	0	5.2	5.2	0	1.7	5.2	5.2	5.2												
Ref No.	IC3																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
CD PLAY	1.7	1.7	0	1.7	5	3.2	0	5.2	5.2	2.6	2.6	2.6	0	5.2	0.2	5.2				
STANDBY	1.7	1.7	0	1.7	5	3.2	0	5.2	5.2	2.6	2.6	2.6	0	5.2	0.1	5.2				

SA-PT950P/PC XM MODULE P.C.B.

15.6. Panel P.C.B.

Ref No.	IC6106																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	-7.1	0	0	0	7												
STANDBY	0	0	0	-7.1	0	0	0	7.1												
Ref No.	IC6901																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	5	3.1	2	2	4.1	2.8	2	2	0	5.2	-24.5	-24.5	-22.1	-22.1	15.5	22.1	-14.9
STANDBY	5	0	0	0	3.1	2.2	4.9	0	0	2.2	2.2	0	5.2	-24.5	-24.5	-24.5	-22.1	-12.4	-10	-172
Ref No.	IC6901																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	-24.6	-24.6	-24.6	-19.7	-17.3	-24.6	-24.6	-24.6	19.8	-25	-17.5	-17.5	-22.4	-22.4	-22.3	-22.4	-22.4	-22.4	-22.4	-22.4
STANDBY	-24.5	-24.5	-22.1	-12.4	-10.1	-22.1	-24.5	-22.1	-10.1	-24.9	-15	-12.6	-22.3	-22.3	-22.3	-22.3	-22.3	-22.3	-22.3	-22.3
Ref No.	IC6901																			
MODE	41	42	43	44																
CD PLAY	-22.4	-22.4	5.2	0																
STANDBY	-22.3	-22.3	5.2	0																
Ref No.	Q6102				Q6103				Q6110				Q6111				Q6202			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	0.6		7	0.1	7.1		0	0	4.5		0	6.4	0		2.3	2.3	0	
STANDBY	0	0	0.7		7.1	0.1	6.8		0	0	4.8		0	6.4	0		2.3	2.3	0	
Ref No.	Q6901				Q6903															
MODE	E	C	B		E	C	B													
CD PLAY	0	4.9	0		4.9	-0.6	4.9													
STANDBY	0	5.2	0		5.2	-0.8	5.2													

SA-PT950P/PC PANEL P.C.B.

15.7. D-Port, Tray Motor, Loading Motor, Sensor & Tray P.C.B.

Ref No.	IC8002						IC8003							
MODE	1	2	3	4	5		1	2	3	4	5	6	7	8
CD PLAY	0	5.2	0	0	-		3.5	3.5	3.5	0	3.5	3.5	3.5	7.0
STANDBY	0	5	0	0	-		3.4	3.3	3.5	0	3.3	3.5	3.5	7.1

SA-PT950P/PC D-PORT P.C.B.

Ref No.	Q9101					Q9102			
MODE	1	2	3	4		1	2	3	4
CD PLAY	1.2	0	4.7	0		2.5	1.2	0.1	0
STANDBY	0.1	0	4.8	0		0.4	-0.2	4.8	0

SA-PT950P/PC TRAY MOTOR P.C.B.

Ref No.	Q9001			
MODE	1	2	3	4
CD PLAY	1.2	4.5	0	0
STANDBY	0.2	4.8	0	0

SA-PT950P/PC LOADING MOTOR P.C.B.

Ref No.	Q9103			
MODE	1	2	3	4
CD PLAY	3.7	2.5	0	0.2
STANDBY	0.2	0.4	0	4.7

SA-PT950P/PC SENSOR P.C.B.

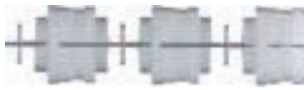
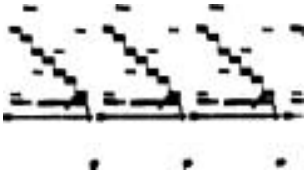
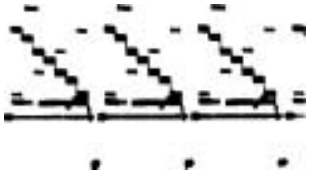
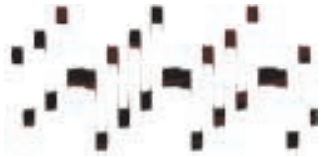
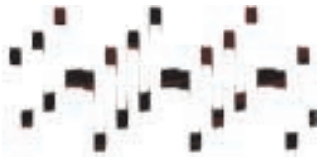
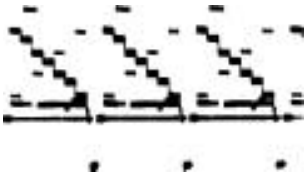
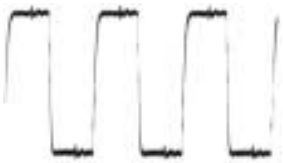
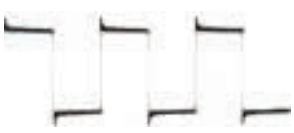
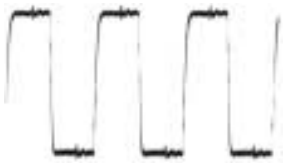
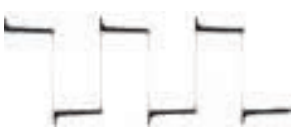
Ref No.	IC7750								
MODE	1	2	3	4	5	6	7	8	9
CD PLAY	0	0	0	0	8.4	8.9	5	0	5
STANDBY	0	0	0	0	8.5	8.9	4.9	0	4.9

Ref No.	Q7101						Q7750		
MODE	1	2	3	4	5	6	E	C	B
CD PLAY	0	4.9	0	0	4.9	0	0	0	4.5
STANDBY	0	4.9	0	0	4.9	0	0	0	4.5

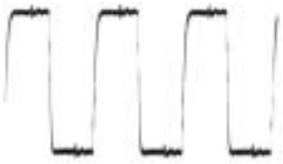
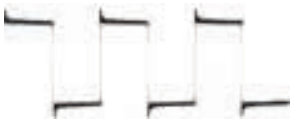
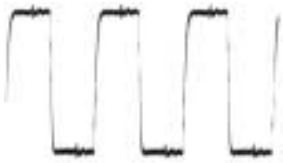
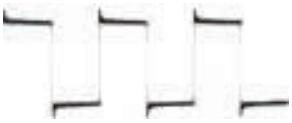
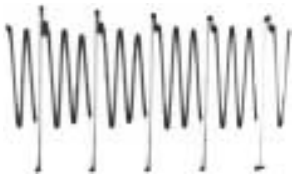
SA-PT950P/PC TRAY P.C.B.

15.8. Waveform Chart

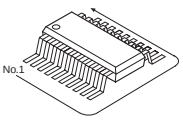
15.8.1. Waveform 1

WF No. IC2001-13 (PLAY) 5.2Vp-p(100nsec/div)	WF No. IC2001-15 (PLAY) 2.8Vp-p(100sec/div)	WF No. IC2101-14,19 (PLAY) 2.4Vp-p(200usec/div)	WF No. IC2101-15,16,17, 18 (PLAY) 8Vp-p(200usec/div)
WF No. IC2101-80 (PLAY) 1.5Vp-p(200usec/div)	WF No. IC2101-81,82 (PLAY) 3.2Vp-p(200usec/div)	WF No. IC2101-91 (PLAY) 1.4Vp-p(200usec/div)	WF No. IC2101-95, 96 (PLAY) 3.2Vp-p(200usec/div)
WF No. IC2102-1 (PLAY) 6.8Vp-p(200usec/div)	WF No. IC2102- 7(PLAY) 1.5Vp-p(200usec/div)	WF No. IC2104-1, 7 (PLAY) 4Vp-p(200usec/div)	WF No. IC2105-2 (PLAY) 0.2Vp-p(20usec/div)
WF No. IC2801-4 (PLAY)  0.7Vp-p(20usec/div)	WF No. IC2801-6 (PLAY)  1.2Vp-p(20usec/div)	WF No. IC2801-8,11 (PLAY)  1.3Vp-p(100nsec/div)	WF No. IC2801-13,15 (PLAY)  3.4Vp-p(2usec/div)
WF No. IC2801-18,21 (PLAY)  0.25Vp-p(20usec/div)	WF No. IC2801-24 (PLAY)  3.4Vp-p(20usec/div)	WF No. IC2801-30 (PLAY) 3.4Vp-p(20usec/div)	WF No. IC5000- 1 (PLAY)  5.8Vp-p(1usec/div)
WF No. IC5000-10,14 (PLAY)  76Vp-p(1usec/div)	WF No. IC5000- 2,22 (PLAY) 0.6Vp-p(200usec/div)	WF No. IC5200- 1 (PLAY)  5.8Vp-p(1usec/div)	WF No. IC5200-10,14 (PLAY)  76Vp-p(1usec/div)

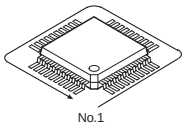
15.8.2. Waveform 2

WF No. IC5200-2,22 (PLAY) 0.6Vp-p(200usec/div)	WF No. IC5300- 1 (PLAY)  5.8Vp-p(1usec/div)	WF No. IC5300-10,14 (PLAY)  76Vp-p(1usec/div)	WF No. IC5300-2,22 (PLAY) 0.6Vp-p(200usec/div)
WF No. IC5400- 1 (PLAY)  5.8Vp-p(1usec/div)	WF No. IC5400-10,14 (PLAY)  76Vp-p(1usec/div)	WF No. IC5400-2,22 (PLAY) 0.6Vp-p(200usec/div)	WF No. IC5500-1,3,5 (PLAY) 7.2Vp-p(500nsec/div)
WF No. IC5500-8 (PLAY) 5.6Vp-p(500nsec/div)	WF No. IC5701-1 (PLAY) 5Vp-p(2usec/div)	WF No. IC5701-2,3,4 (PLAY) 300Vp-p(1usec/div)	WF No. IC5799-2 (PLAY) 100Vp-p(2usec/div)
WF No. IC5799-3 (PLAY) 10.8Vp-p(2usec/div)	WF No. IC5799-5 (PLAY)  280Vp-p(5usec/div)	WF No. IC5801-1,2,3 (PLAY) 0.5Vp-p(2usec/div)	WF No. IC6901-5 (PLAY) 2.8Vp-p(100nsec/div)

16 Illustration of IC's, Transistors and Diodes

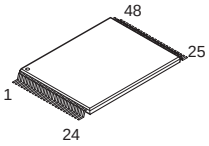


C0ABBB000230 (8p)
C0ABBB000350 (8p)
C0DBZYE00002 (8p)
C0DBZYY00018 (8p)
C0EBA0000029 (4p)
C0FBBK000050 (28p)
C0FBBY000027 (16p)
C0JBAB000902 (14p)
C0JBAF000716 (14p)
C0JBAR000002 (16p)
C0JBAZ001251 (20p)
C3ABPG000145 (54p)
C9ZB00000461 (32p)
XP0621400L (6p)



C0HBB0000057 (44p)
C1AB00002670 (48p)
C1AB00002735 (100p)
MN2DS0018VP (216p)
C2CBYY000442 (100p)
MN864702 (128P)

RFKWMHB0G320



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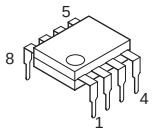

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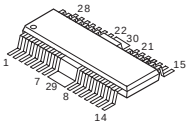

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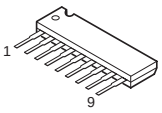

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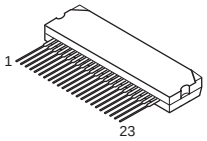

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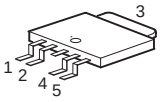

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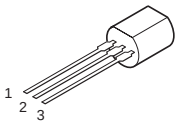

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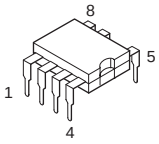

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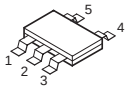

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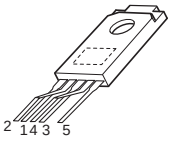

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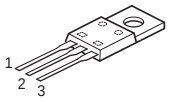

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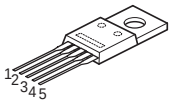

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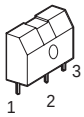

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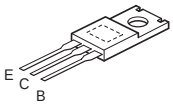

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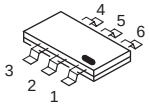

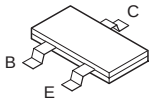

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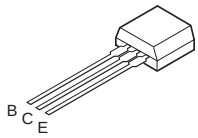

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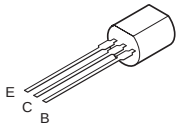

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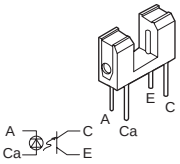

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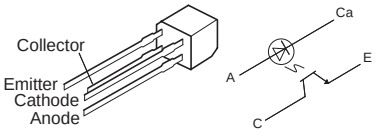

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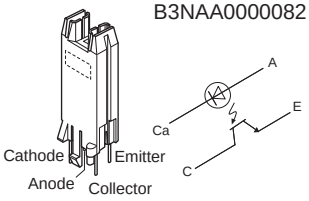

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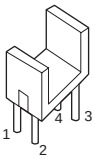

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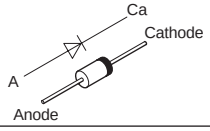

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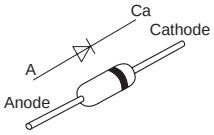

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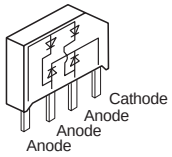

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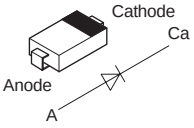

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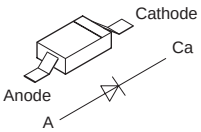

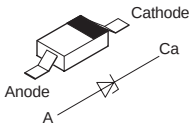

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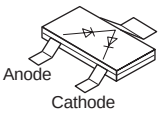

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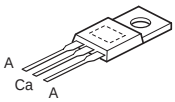

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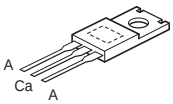

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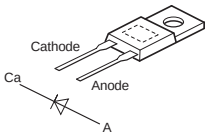

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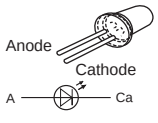

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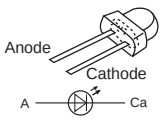
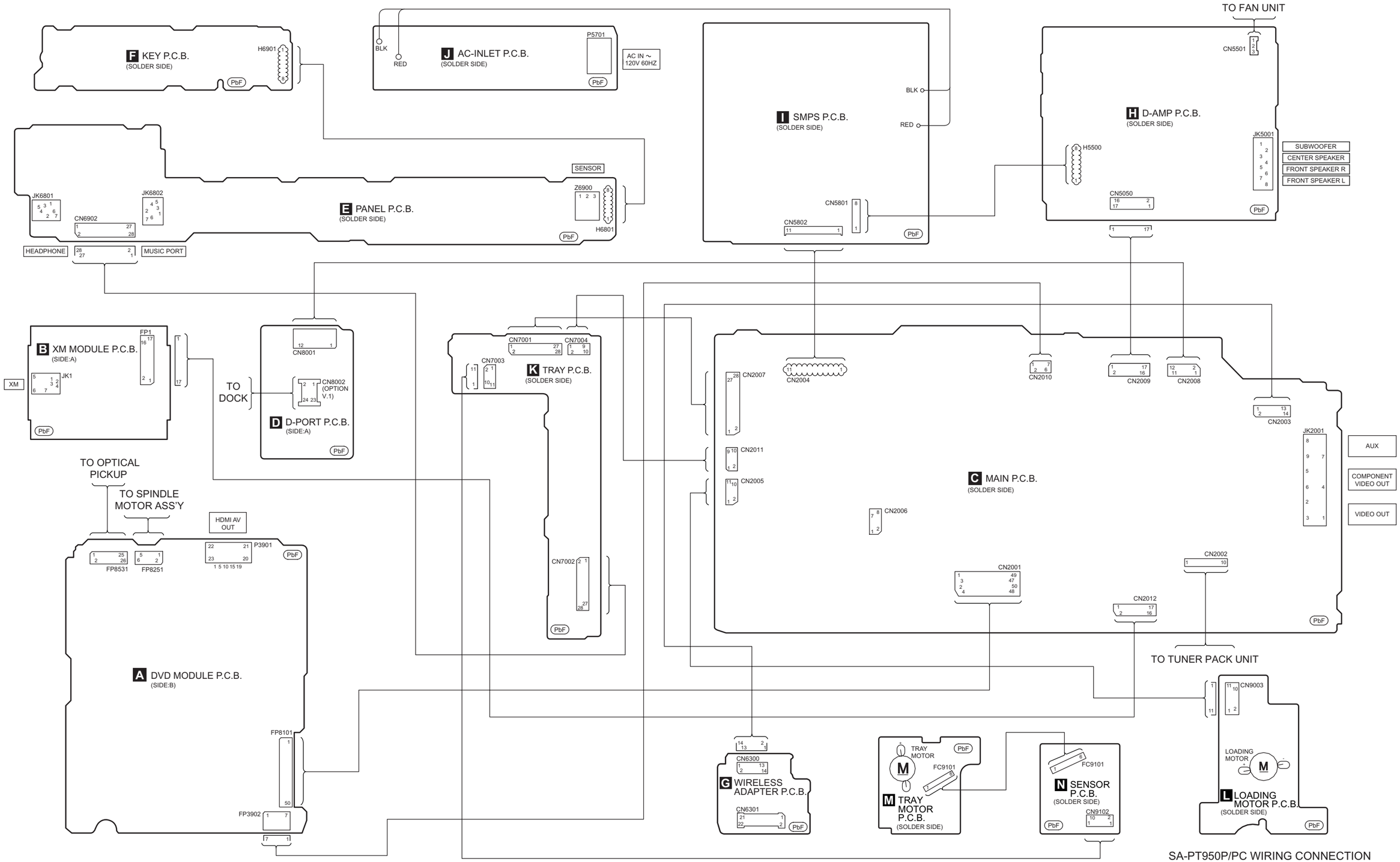


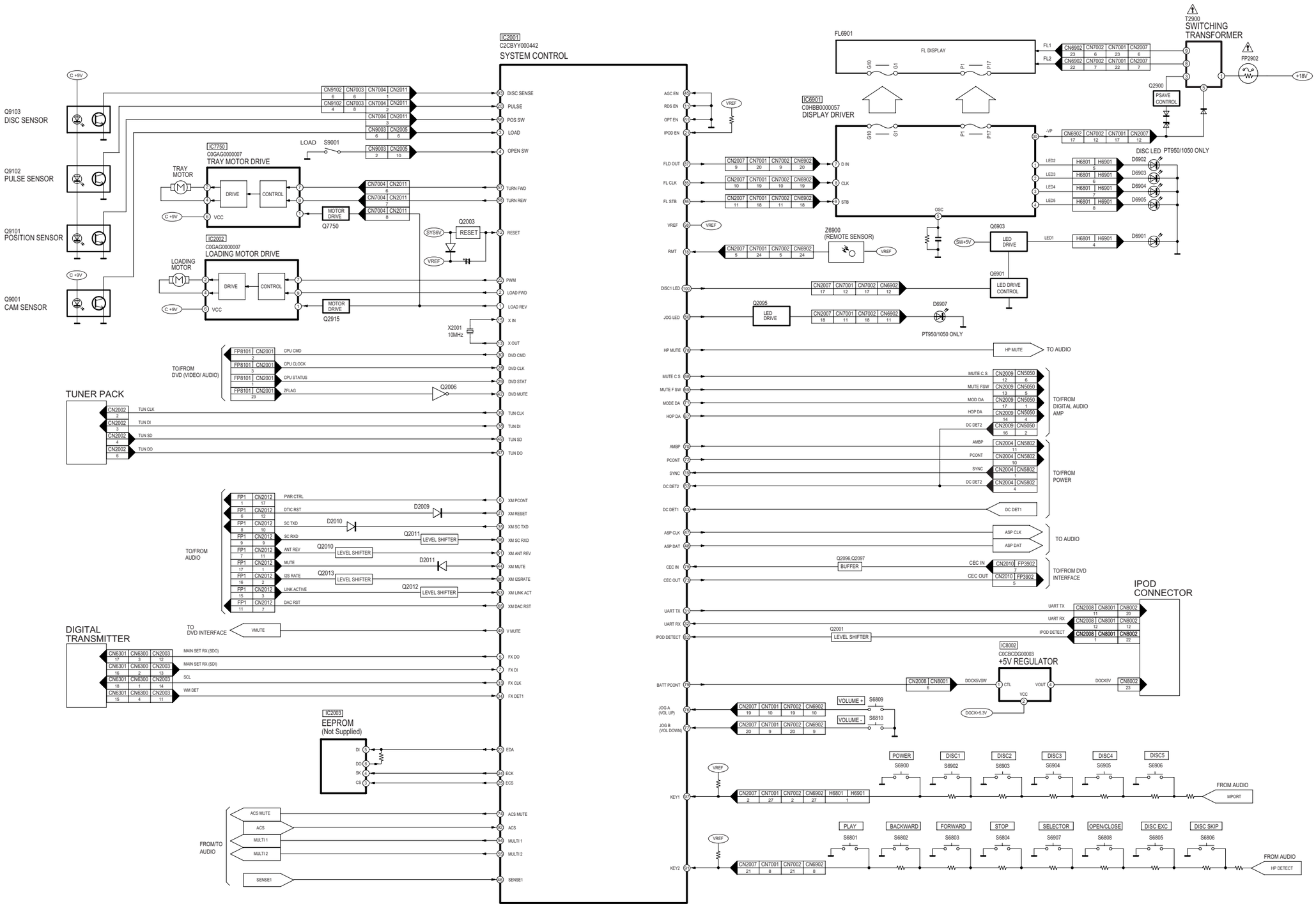
17 Wiring Connection Diagram



SA-PT950P/PC WIRING CONNECTION

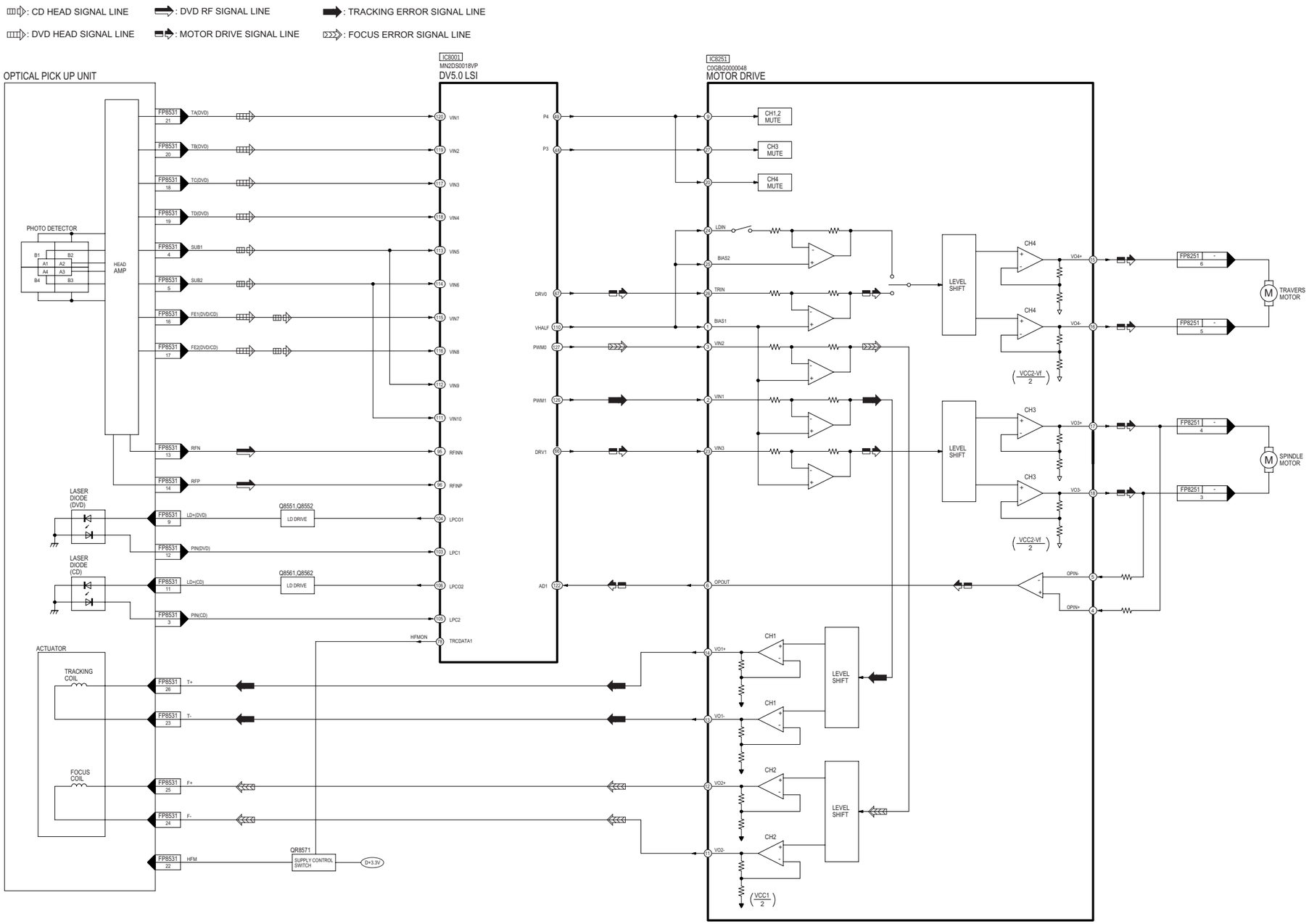
18 Block Diagram

18.1. System Control



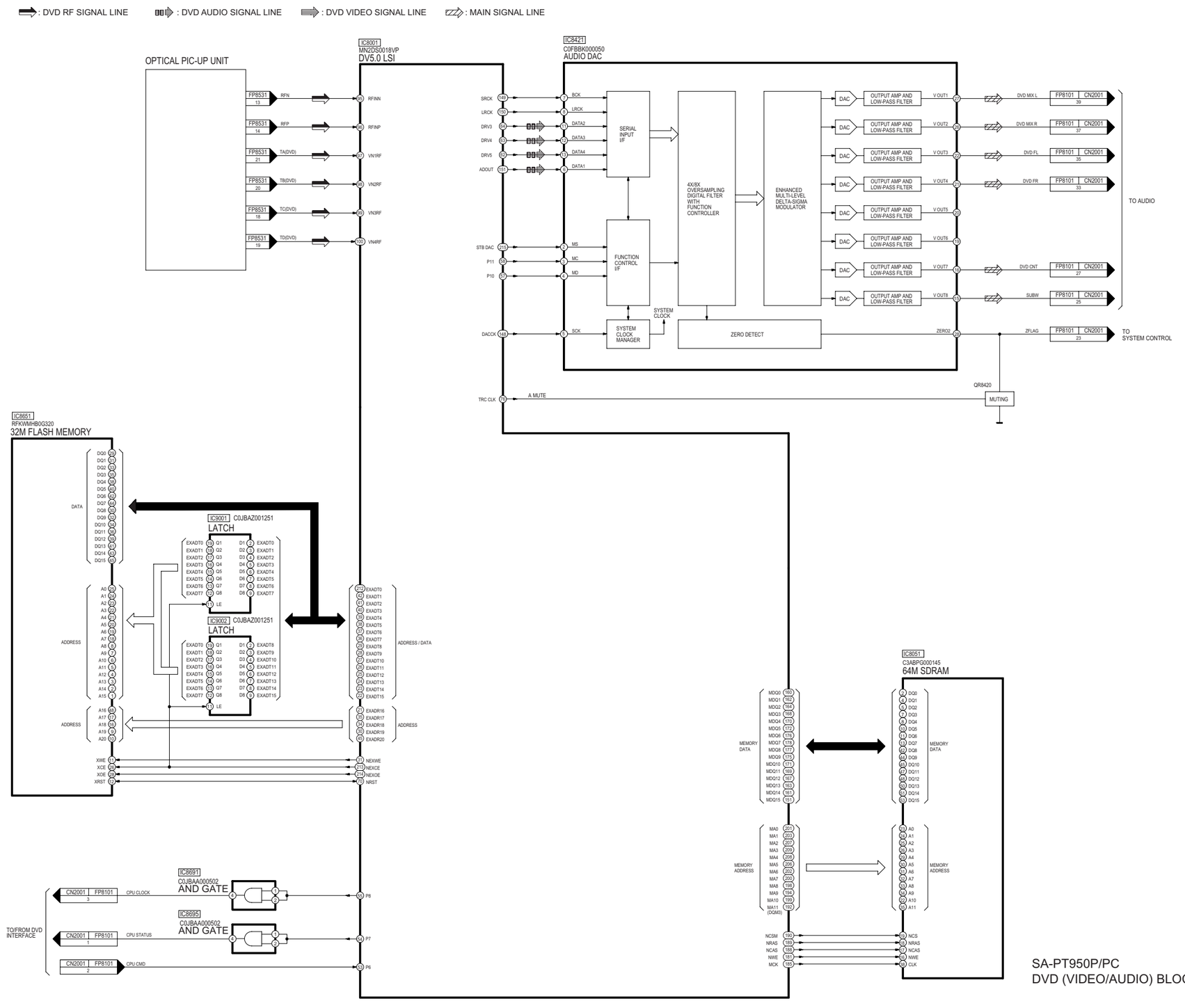
SA-PT950P/PC SYSTEM CONTROL BLOCK DIAGRAM

18.2. DVD (Servo)



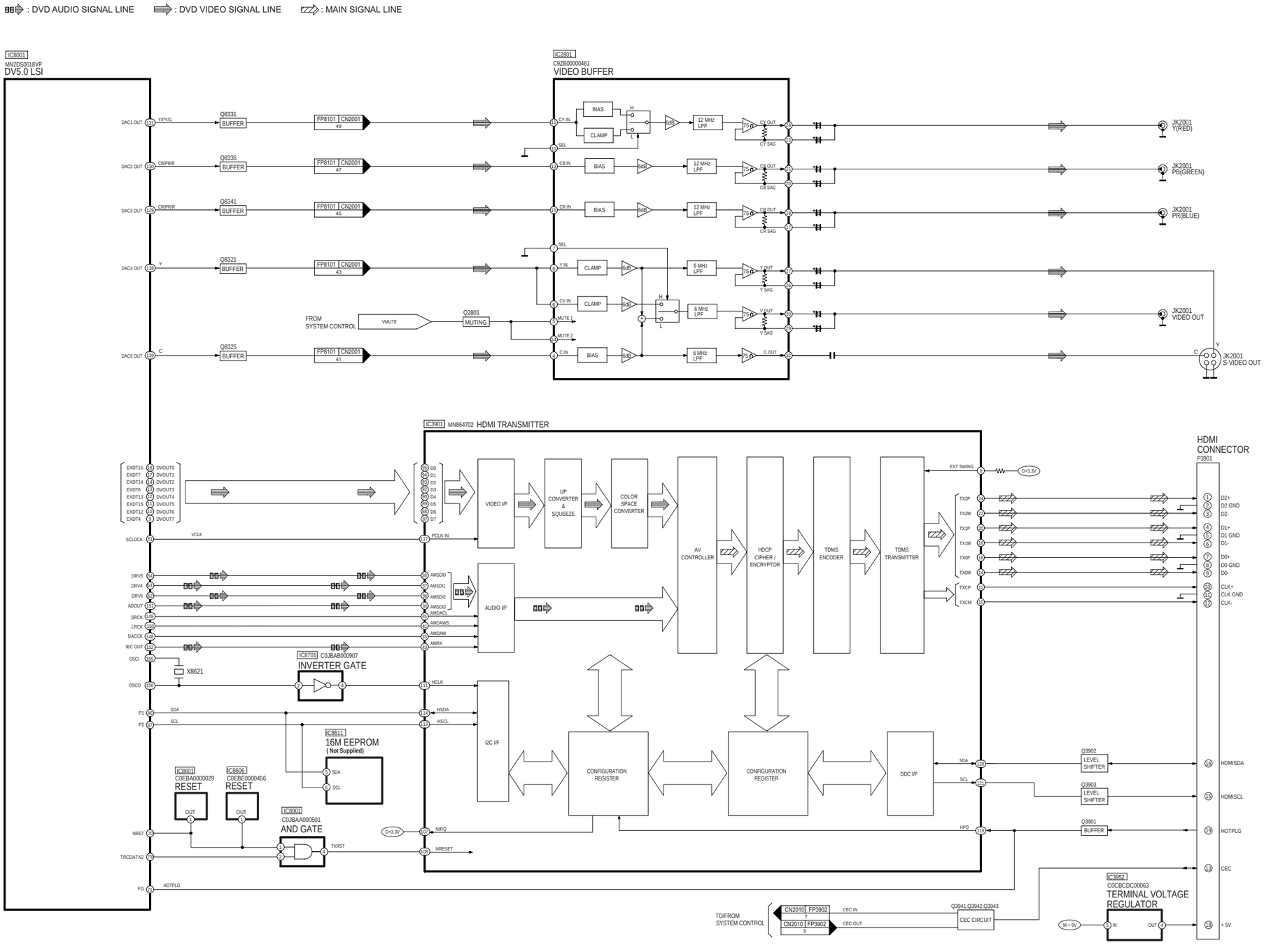
SA-PT950P/PC DVD (SERVO) BLOCK DIAGRAM

18.3. DVD (Video/Audio)



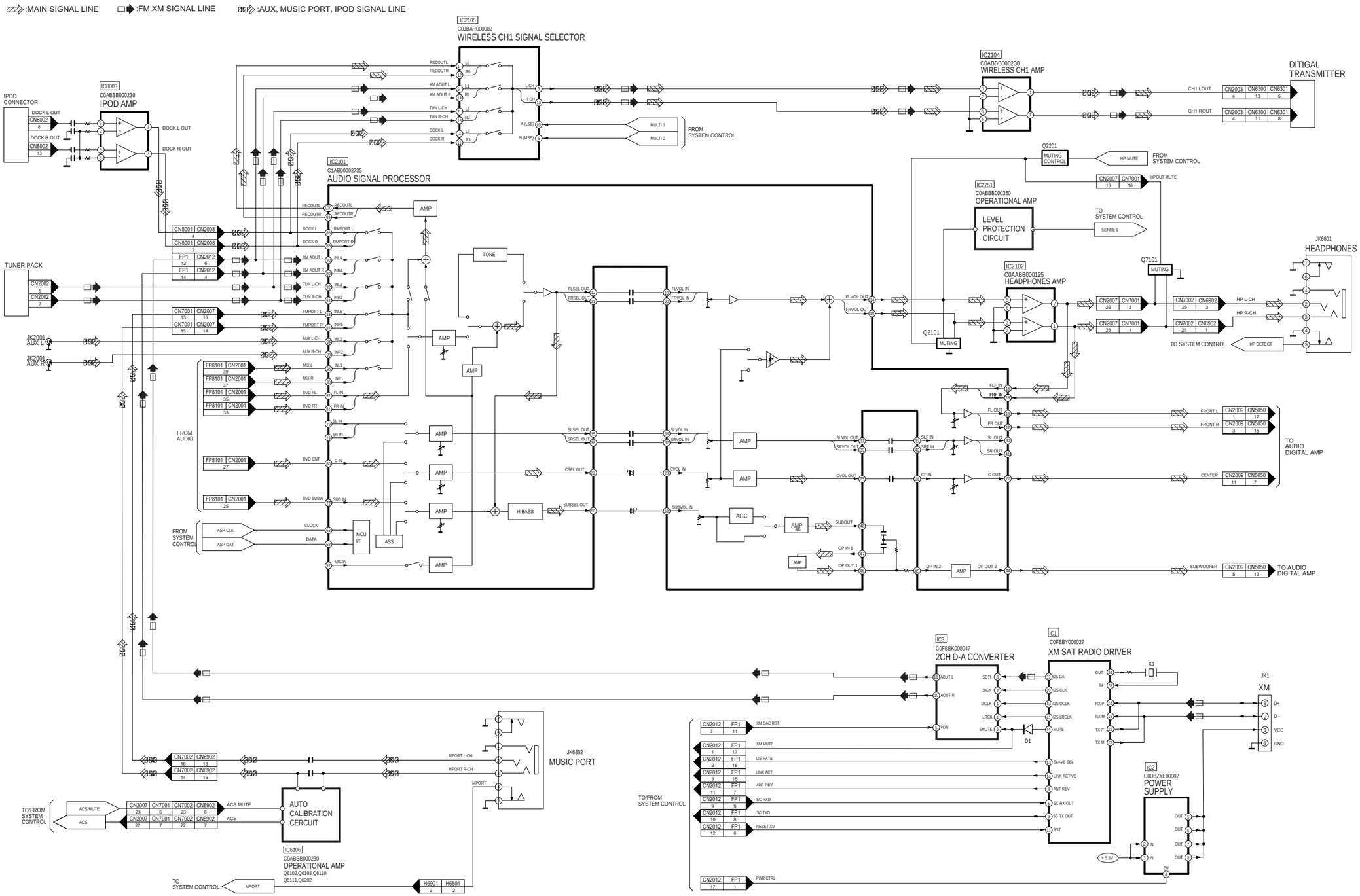
SA-PT950P/PC
DVD (VIDEO/AUDIO) BLOCK DIAGRAM

18.4. DVD Interface

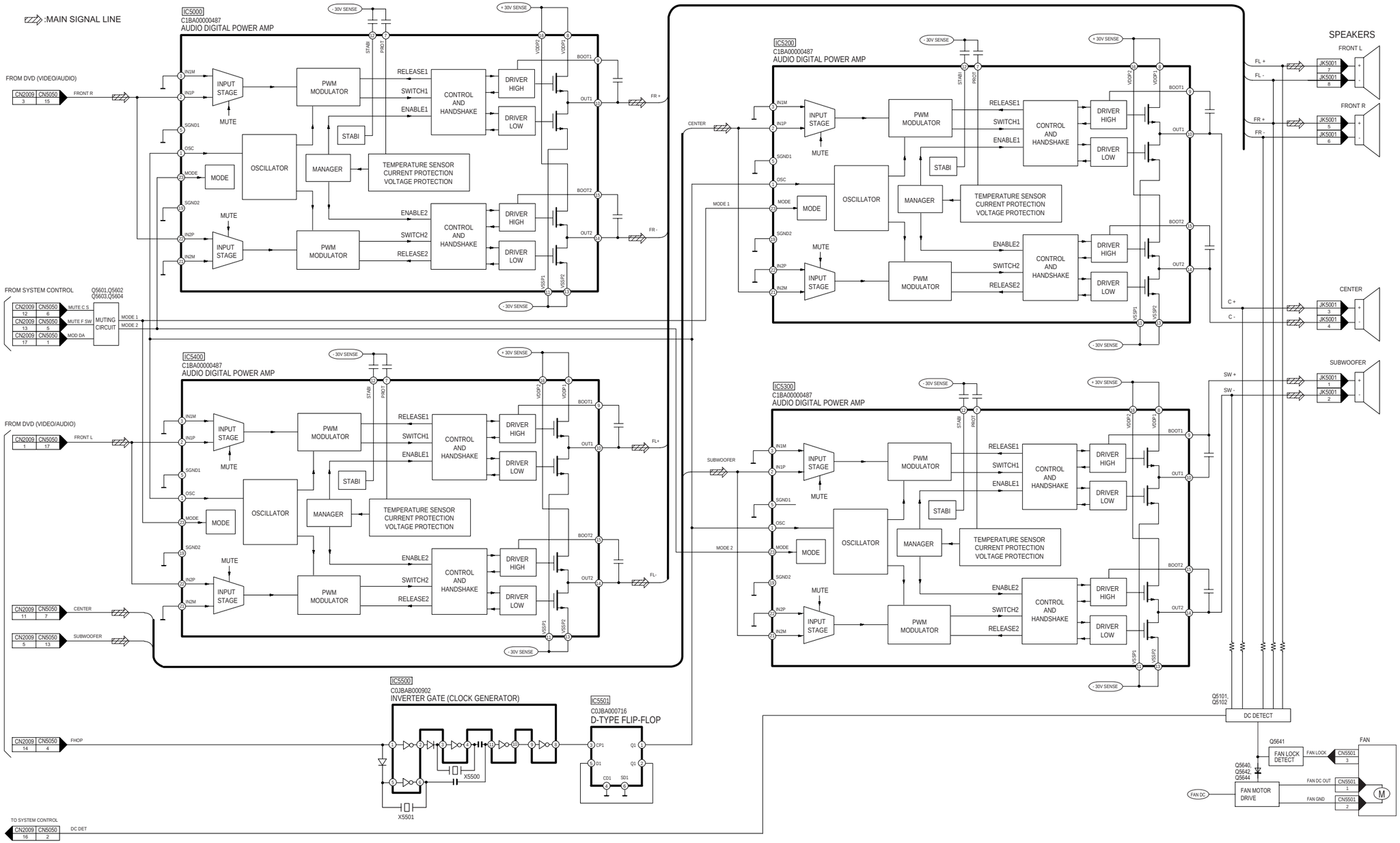


SA-PT950P/PC DVD INTERFACE BLOCK DIAGRAM

18.5. Audio

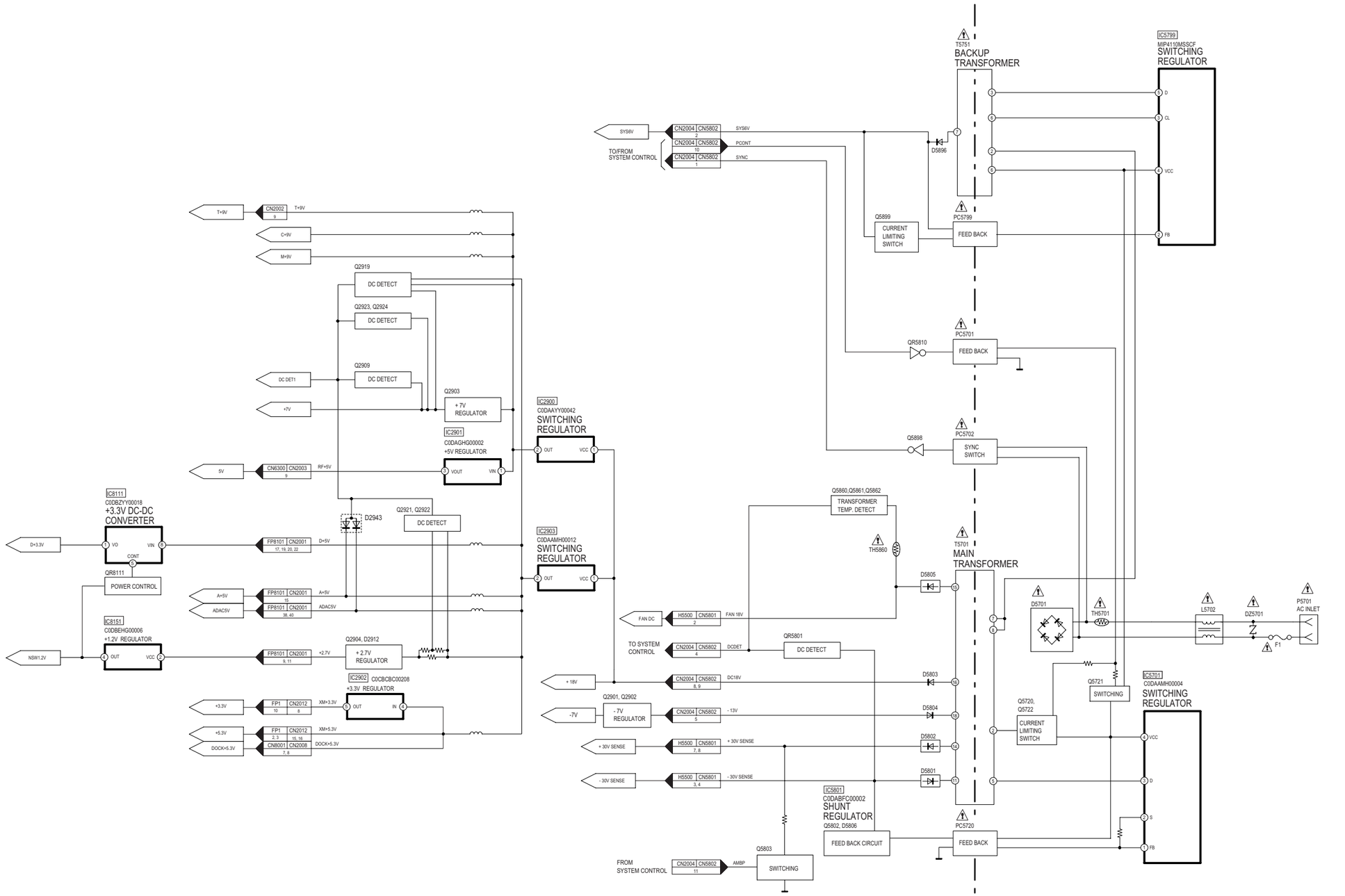

:MAIN SIGNAL LINE
:FM,XM SIGNAL LINE
:AUX, MUSIC PORT, IPOD SIGNAL LINE
IC2105
C0JBAR000002
WIRELESS CH1 SIGNAL SELECTOR
IC2104
C0ABBB000230
WIRELESS CH1 AMP
DITIGAL TRANSMITTER
IC8003
C0ABBB000230
IPOD AMP
IPOD CONNECTOR
IC2101
C1AB00002735
AUDIO SIGNAL PROCESSOR
TUNER PACK
JK2001
AUX L
AUX R
FROM AUDIO
FROM SYSTEM CONTROL
TONE
H BASS
AGC
ASS
MCU I/F
FROM SYSTEM CONTROL
Q2201
MUTING CONTROL
HP MUTE
IC2751
C0ABBB000350
OPERATIONAL AMP
LEVEL PROTECTION CIRCUIT
SENSE 1
HPOUT MUTE
Q7101
MUTING
JK6801
HEADPHONES
IC2102
C0AABB000125
HEADPHONES AMP
Q2101
MUTING
TO SYSTEM CONTROL
HP DETECT
TO AUDIO DIGITAL AMP
IC3
C0FBBK000047
2CH D-A CONVERTER
IC1
C0FBBY000027
XM SAT RADIO DRIVER
X1
JK1
XM
D1
IC2
C0DBZYE00002
POWER SUPPLY
JK6802
MUSIC PORT
AUTO CALIBRATION CERCUIT
IC6106
C0ABBB000230
OPERATIONAL AMP
Q6102,Q6103,Q6110, Q6111,Q6202
TO/FROM SYSTEM CONTROL
TO SYSTEM CONTROL
SA-PT950P/PC AUDIO BLOCK DIAGRAM

18.6. Audio Digital Amp



SA-PT950P/PC AUDIO DIGITAL AMP BLOCK DIAGRAM

18.7. Power



SA-PT950P/PC POWER BLOCK DIAGRAM

19 Schematic Diagram Notes

· **This schematic diagram may be modified at any time with the development of new technology.**

Notes:

S6801:	Play switch (▶ / MEMORY).
S6802:	Backward switch (⏮ / ◀◀ / TUNING ⋁).
S6803:	Forward switch (▶▶ / ⏭ / TUNING ⋀).
S6804:	Stop switch (■ / -TUNE MODE/— FM MODE).
S6805:	DISC EXC switch (—EXCHANGE).
S6806:	DISC SKIP switch (—SKIP).
S6808:	Open / close switch (⏏ OPEN / CLOSE).
S6809:	(Volume) Up switch.
S6810:	(Volume) Down switch.
S6900:	Power switch (POWER ⏻/|).
S6902-S6906:	DISC 1- DISC 5 switch (5 DISC SELECTOR).
S6907:	SELECTOR switch.
S9001:	LOAD switch.

· Important safety notice:

Components identified by ⚠ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacturer´s specified parts shown in the parts list.

· In case of AC rated voltage Capacitor, the part no. and values will be indicated in the Schematic Diagram.

AC rated voltage capacitor:

C5700, C5701,C5703, C5704, C5705

· **Resistor**

Unit of resistance is OHM [Ω] (K=1,000, M=1,000,000).

· **Capacitor**

Unit of capacitance is μF, unless otherwise noted. F=Farad, pF=Pico-Farad

· **Coil**

Unit of inductance is H, unless otherwise noted.

· Voltage and signal line

: +B signal line

: -B signal line

: DVD RF signal line

: Motor Drive signal line

: DVD Audio signal line

: DVD Video signal line

: CD Head signal line

: DVD Head signal line

: Main signal line

: Tracking Error signal line

: Focus Error signal line

: FM, XM signal line

: AUX, Music Port, Ipod signal line

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE 233 F1 8.0A 125V FUSE

RISK OF FIRE-REPLACE FUSE AS MARKED.

FUSE CAUTION

These symbols located near the fuse indicates that the fuse used is a fast operating type. For continued protection against fire harzard, replace with the same type fuse. For fuse rating, refer to the marking adjacent to the symbol.

Ce symbole indique que le fusible utilisé est à rapide. Pour une protection permanente, n' utiliser que des fusibles de même type. Ce dernier est indiqué là qù le présent symbole est apposé.

20 Schematic Diagram

20.1. DVD Module (DV5/HDMI) Circuit

SCHEMATIC DIAGRAM - 1

A DVD MODULE (DV5) CIRCUIT

: CD HEAD SIGNAL LINE
: DVD RF SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: +B SIGNAL LINE
: DVD HEAD SIGNAL LINE
: MOTOR DRIVE SIGNAL LINE
: DVD VIDEO SIGNAL LINE

TO DVD MODULE (DV5) SECTION (2/4)

D2: DVD MODULE (DV5): SCHEMATIC DIAGRAM 1 - 4
HD: DVD MODULE (HDMI): SCHEMATIC DIAGRAM - 5

TO DVD MODULE (DV5) SECTION (3/4)

IC8651 RFKWMHB0G320 32M FLASH MEMORY

IC8001 MN2DS0018VP DV5.0LSI

1/4	2/4
3/4	4/4

SA-PT950P/PC
DVD MODULE (DV5) CIRCUIT

SCHEMATIC DIAGRAM - 2

A DVD MODULE (DV5) CIRCUIT

: +B SIGNAL LINE : DVD AUDIO SIGNAL LINE : DVD VIDEO SIGNAL LINE : MAIN SIGNAL LINE

D2: DVD MODULE (DV5): SCHEMATIC DIAGRAM 1 - 4
HD: DVD MODULE (HDMI): SCHEMATIC DIAGRAM - 5

TO DVD MODULE (DV5) SECTION (1/4)

IC8421 C0FBBK000050 AUDIO DAC

IC8151 C0DBEHG00006 +1.2V REGULATOR

QR8420 UNR521100L MUTING

Q8325 2SB1218ARL BUFFER
Q8321 2SB1218ARL BUFFER
Q8331 2SB1218ARL BUFFER
Q8335 2SB1218ARL BUFFER
Q8341 2SB1218ARL BUFFER

IC8701 C0JBAB000907 INVERTER GATE

IC8691 C0JBAA000502 AND GATE

IC8695 C0JBAA000502 AND GATE

FP8101

50	VGND	25	SW
49	Y/PY/G	24	A-REF
48	VGND	23	ZFLAG&AMUTE
47	CB/PB/B	22	D+5V
46	VGND	21	AUDIODIGTAL
45	CR/PR/R	20	D+5V
44	VGND	19	D+5V
43	Y	18	DGND
42	VGND	17	D+5V
41	C	16	DGND
40	ADAC5V	15	A+5V
39	MIX-L	14	AGND
38	ADAC5V	13	A+5V
37	MIX-R	12	AGND
36	ADGND	11	2R5V
35	FL	10	DGND
34	ADGND	9	2R5V
33	FR	8	DGND
32	ADGND	7	M+9V
31	SL	6	MGND
30	ADGND	5	M+9V
29	SR	4	MGND
28	ADGND	3	DOP_CPU-CLK
27	CNT	2	DOP_CPU-CMD
26	ADGND	1	DOP_CPU-STAT

TO C MAIN CIRCUIT (CN2001) IN SCHEMATIC DIAGRAM-9

TO DVD MODULE (DV5) SECTION (4/4)

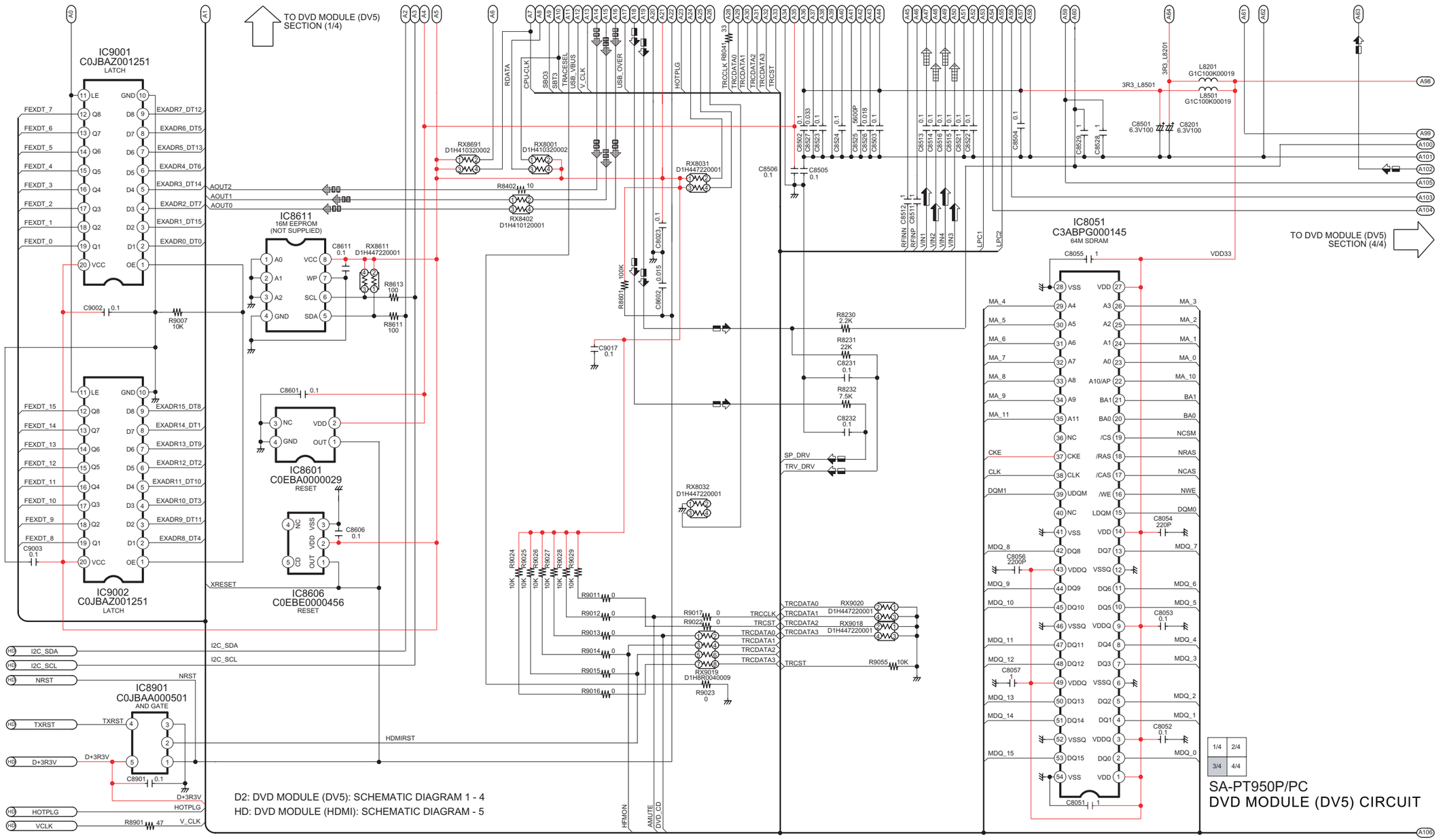
1/4	2/4
3/4	4/4

SA-PT950P/PC
DVD MODULE (DV5) CIRCUIT

SCHEMATIC DIAGRAM - 3

A DVD MODULE (DV5) CIRCUIT

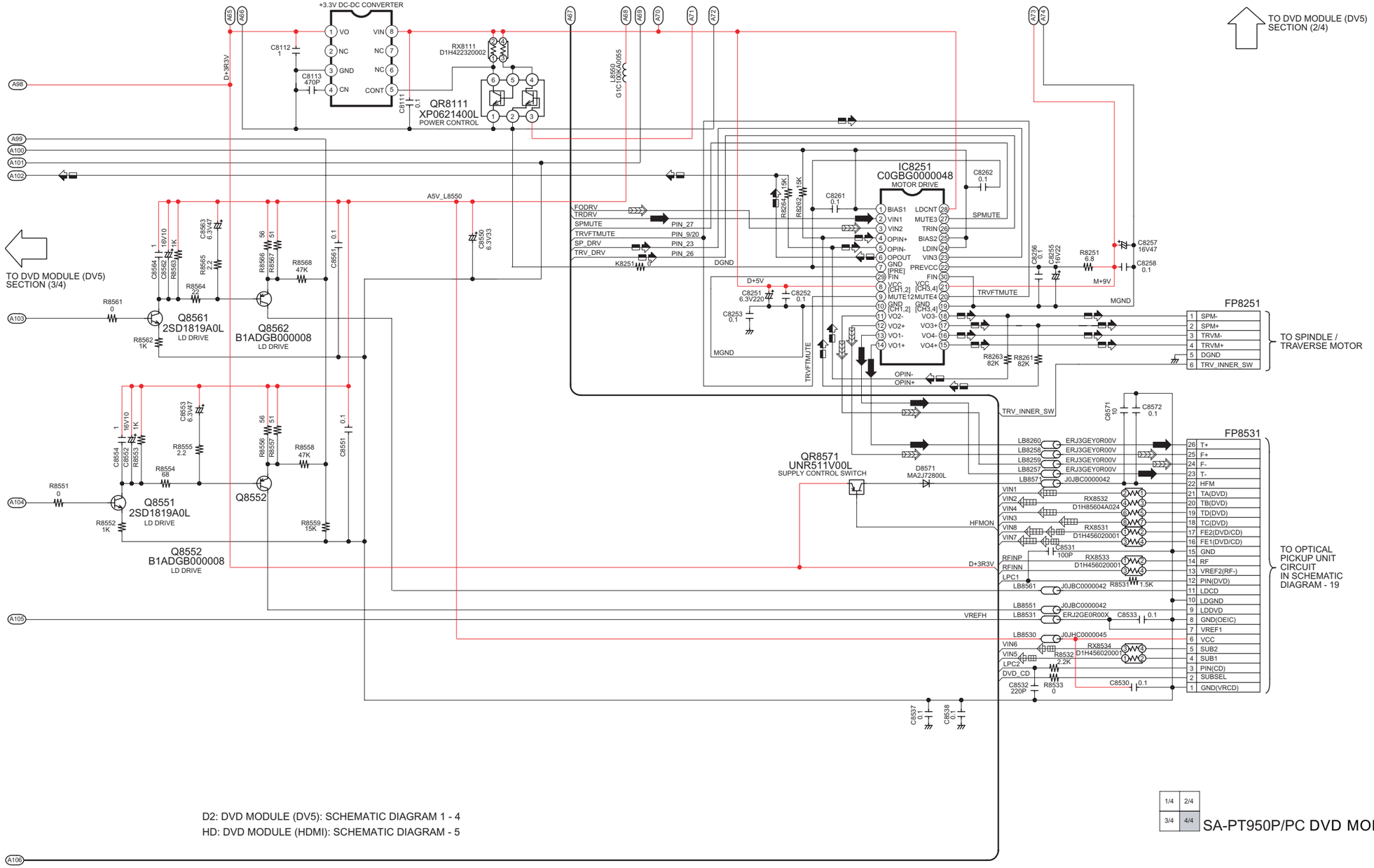
: +B SIGNAL LINE : DVD HEAD SIGNAL LINE : MOTOR DRIVE SIGNAL LINE : DVD RF SIGNAL LINE : DVD AUDIO SIGNAL LINE



SCHEMATIC DIAGRAM - 4

A DVD MODULE (DV5) CIRCUIT

: +B SIGNAL LINE
: CD HEAD SIGNAL LINE
: DVD HEAD SIGNAL LINE
: MOTOR DRIVE SIGNAL LINE
: TRACKING ERROR SIGNAL LINE
: FOCUS ERROR SIGNAL LINE



D2: DVD MODULE (DV5): SCHEMATIC DIAGRAM 1 - 4
HD: DVD MODULE (HDMI): SCHEMATIC DIAGRAM - 5

1/4	2/4
3/4	4/4

SA-PT950P/PC DVD MODULE (DV5) CIRCUIT

SCHEMATIC DIAGRAM - 5

A DVD MODULE(HDMI) CIRCUIT

: +B SIGNAL LINE : DVD AUDIO SIGNAL LINE : DVD VIDEO SIGNAL LINE : MAIN SIGNAL LINE

IC3901
MN864702
HDMI TRANSMITTER

IC3952
C0CBCDC00063
TERMINAL VOLTAGE REGULATOR

Q3901
2SD1819A0L
BUFFER

Q3902
B1CFHA000002
LEVEL SHIFTER

Q3903
B1CFHA000002
LEVEL SHIFTER

Q3941 - Q3942
2SD1819A0L
SWITCH

Q3943
2SD1819A0L
BUFFER

VA3901-VA3908
EZAEG2A50AX

VA3909-VA3913
EZJZ0V800AA

P3901
HDMI AV OUT

FP3902
TO C
MAIN CIRCUIT
(CN2010)
IN SCHEMATIC
DIAGRAM - 9

D2: DVD MODULE (DV5): SCHEMATIC DIAGRAM 1 - 4
HD: DVD MODULE (HDMI): SCHEMATIC DIAGRAM - 5

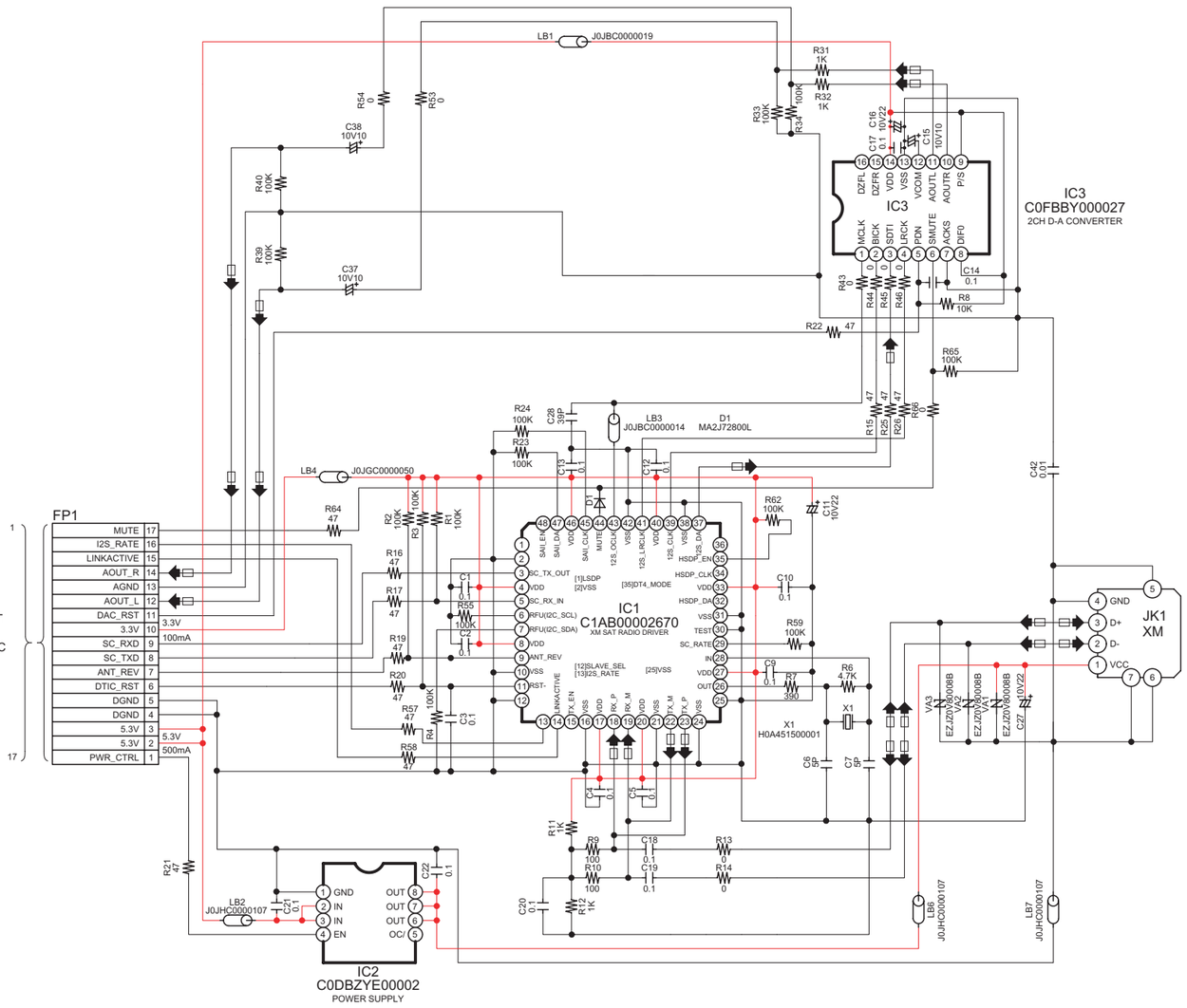
SA-PT950P/PC DVD MODULE (HDMI) CIRCUIT

20.2. XM Module & Main Circuit

SCHEMATIC DIAGRAM - 6

B XM MODULE CIRCUIT

:+B SIGNAL LINE :XM SIGNAL LINE



SA-PT950P/PC XM MODULE CIRCUIT

SCHEMATIC DIAGRAM - 7

C MAIN CIRCUIT

:-B SIGNAL LINE
:+B SIGNAL LINE
:MAIN SIGNAL LINE
:FM,XM SIGNAL LINE
:DVD VIDEO LINE

CN2002
TUNERGND 10
T+9V 9
RDS DETECT 8
TUNER RCH 7
TUNER DO/ST 6
TUNER LCH 5
TUNER SD 4
TUNER DI 3
TUNER CLK 2
PORT_SEL 1
TO TUNER PACK (J3CCBB000007)
TU+9V
TUN-RCH
TUN_DO
TUN-LCH
TUN_SD
TUN_DI
TUN_CLK
AGND
CHASSIS
VREF

IC2104 C0ABBB000230 DUAL OP AMP (WIRELESS CH1 AMP)
CH2_R_OUT
CH2_L_OUT
AGND
-7V

IC2105 C0JBAR000002 DUAL 4CH MULTIPLEXER (WIRELESS CH1 SIGNAL SELECTOR)
XM_AOUT_L
TUN-LCH
TUN-RCH
XM_AOUT_R
MULTI_1
MULTI_2

Q2010 - Q2013 B1GBCFJJ0051 LEVEL SHIFTER
Q2010 Q2011 Q2012 Q2013

CN2012
PWR_CTRL 17
5.3V 16
5.3V 15
DGND 14
DGND 13
DTIC_RST 12
ANT_REV 11
SC_TXD 10
SC_RXD 9
3.3V 8
DAC_RST 7
AOUT_L 6
AGND 5
AOUT_R 4
LINKACTIVE 3
I2S_RATE 2
MUTE 1
TO B XM MODULE CIRCUIT (FP1) IN SCHEMATIC DIAGRAM - 6
XM_PCONT
DGND
XM_RESET
XM_ANT_REV
XM_SC_TXD
XM_SC_RXD
XM_DACRST
XM_AOUT_L
XM_AOUT_R
XM_LINK_ACT
XM_I2SRATE
XM_MUTE
AGND

IC2902 C0CBCBC00208 +3.3V REGULATOR
XM+3.3V
XM+5.3V
DGND

TO MAIN SECTION (3/4)

IC2801 C9ZB00000461 VIDEO BUFFER
VGND CR CB PY Y C
DVD_A+5V
VIDEO_+5V
CROUT CBOUT CYOUT VOUT

Q2801 B1GBCFJN0033 MUTING
VMUTE

Q2201 B1GDCFGA0018 MUTING CONTROL
Q2101 B1GFGCAA0001 MUTING

IC2751 C0ABBB000350 OP-AMP
IC2102 C0AABB000125 OP AMP (HEADPHONES AMP)
WL_SUBW_RCH
WL_SUBW_LCH
SL OUT
SR OUT
SENSE1
6dB Clip
3dB Clip
+VCC
-VCC
HP-LCH
HP-RCH
HP_MUTE
HPOUT_MUTE

TO MAIN SECTION (2/4)

W2901 ...P
W2903 ...PC
W2906

1/4 2/4 3/4 4/4
SA-PT950P/PC MAIN CIRCUIT

SCHEMATIC DIAGRAM - 8

C MAIN CIRCUIT

:-B SIGNAL LINE

:+B SIGNAL LINE

:MAIN SIGNALLINE

:MUSIC PORT, IPOD SIGNAL LINE

TO MAIN SECTION (1/4)

TO K TRAY CIRCUIT (CN7004) IN SCHEMATIC DIAGRAM - 17

TO L LOADING MOTOR CIRCUIT (CN9003) IN SCHEMATIC DIAGRAM - 18

TO D D-PORT CIRCUIT (CN8001) IN SCHEMATIC DIAGRAM - 11

TO MAIN SECTION (4/4)

TO K TRAY CIRCUIT (CN7001) IN SCHEMATIC DIAGRAM - 17

TO H D-AMP CIRCUIT (CN5050) IN SCHEMATIC DIAGRAM - 14

FOR SOFTWARE

CN2011 CN2005 CN2008 CN2007 CN2006 CN2009

IC2001 C2CBYY000442 SYSTEM CONTROL

IC2002 C0GAG0000007 LOADING MOTOR DRIVE

IC2003 EEPROM (NOT SUPPLIED)

Q2095 B1GDCFJJ0047 LED DRIVE

Q2915 B1GBCFJJ0051 MOTOR DRIVE

Q2001 B1GBCFJJ0051 LEVEL SHIFTER

Q2003 B1GBCFLL0037 RESET

X2001 H2B100500004

E2901 CHASSIS

1/4	2/4
3/4	4/4

SA-PT950P/PC MAIN CIRCUIT

SCHEMATIC DIAGRAM - 9

C MAIN CIRCUIT

:-B SIGNAL LINE
:+B SIGNAL LINE
:MAIN SIGNAL LINE
:FM,XM SIGNAL LINE
:DVD VIDEO LINE
:AUX, MUSIC PORT, IPOD SIGNAL LINE

TO A DVD MODULE (HDMI) CIRCUIT (FP3902) IN SCHEMATIC DIAGRAM - 5

CN2010
2CH_SEL 1
NSW+6V 2
DMIX_SEL 3
+5V_SW 4
CECOUT 5
DGND 6
CECIN 7

SYS6V
CEC_OUT
CEC_IN
GNDE

Q2096-Q2097
2SD0601AHL
BUFFER
Q2097
Q2096

CN2001
DOP_CPU_STAT 1
DOP_CPU_CMD 2
DOP_CPU_CLK 3
MGND 4
M+9V 5
MGND 6
M+9V 7
DGND 8
+2.7V 9
DGND 10
+2.7V 11
AGND 12
A+5V 13
AGND 14
A+5V 15
DGND 16
D+5V 17
DGND 18
D+5V 19
D+5V 20
AUDIODIGITAL 21
D+5V 22
ZFLAG&AMUT 23
A-REF 24
SW 25
ADGND 26
CNT 27
ADGND 28
SR 29
ADGND 30
SL 31
ADGND 32
FR 33
ADGND 34
FL 35
ADGND 36
MIX-R 37
ADAC5V 38
MIX-L 39
ADAC5V 40
C 41
VGND 42
Y 43
VGND 44
CR/PR/R 45
VGND 46
CB/PB/B 47
VGND 48
Y/PY/G 49
VGND 50

DVD_STAT
DVD_CMD
DVD_CLK
MGND
M+9V
DGND
DVD_2R7
AGND
DVD_A+5V
DVD_D+5V
DVD_MUTE
DGND
DVD-SUBW
DVD-CNT
DVD-SR
DVD-SL
DVD-FR
DVD-FL
ADGND
MIXR
MIXL
DVD_ADAC+5V
C
VGND
Y
CR
CB
PY
ADGND

Q2006
B1GBCFJN0033
INVERTER

TO A DVD MODULE (DV5) CIRCUIT (FP8101) IN SCHEMATIC DIAGRAM - 2

TO MAIN SECTION (1/4)

MIXL
MIXR
AUX-LCH
AUX-RCH
TUN-LCH
TUN-RCH
XM_AOUT_L
XM_AOUT_R
F_MPORT-LCH
F_MPORT-RCH
DOCK-LCH
DOCK-RCH
DVD-FL
DVD-FR
AGND
GNDE

IC2101
C1AB00002735
AUDIO SIGNAL PROCESSOR

[100]RECOUTL
[99]RECOUTR
[82]FLIN
[81]FRIN
[48]SUBOUT
[49]SUBC
[50]AGC1
[31]SLFIN
[32]SLVOLOUT
[33]SLNFIN
[34]SLVOLIN

TO MAIN SECTION (4/4)

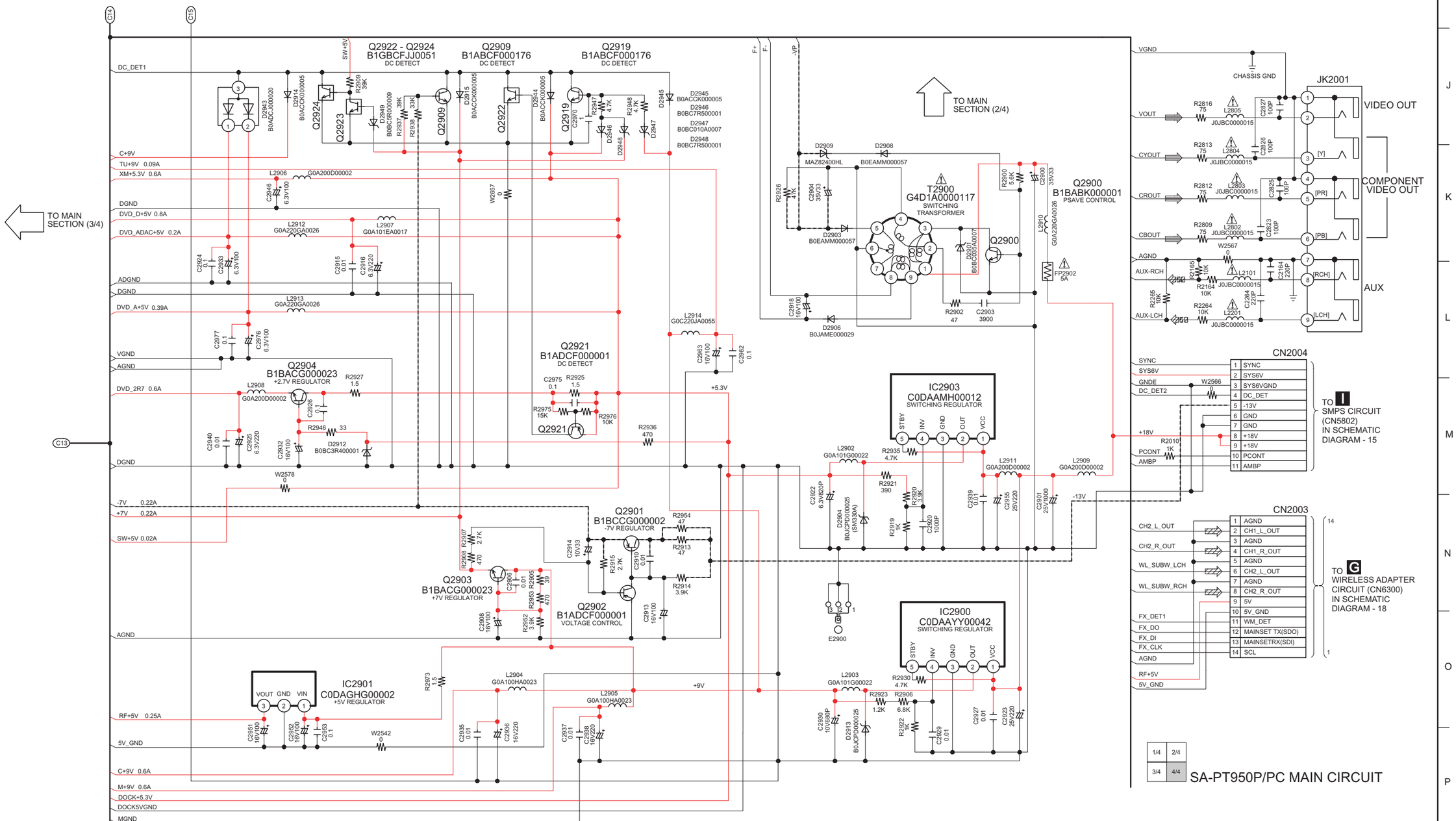
1/4	2/4
3/4	4/4

SA-PT950P/PC MAIN CIRCUIT

SCHEMATIC DIAGRAM - 10

C MAIN CIRCUIT

:-B SIGNAL LINE
:+B SIGNAL LINE
:MAIN SIGNAL LINE
:DVD VIDEO LINE
:AUX SIGNAL LINE

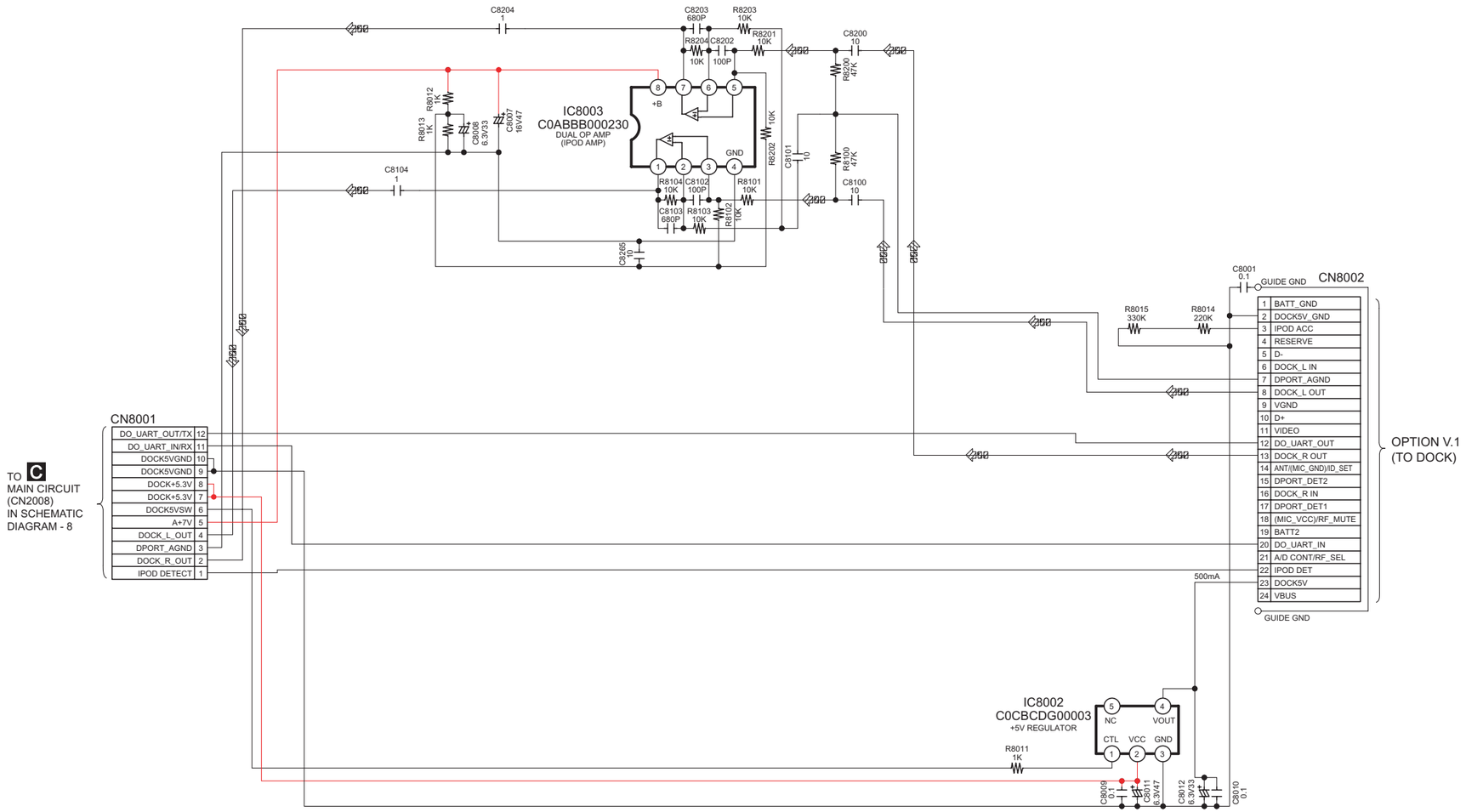


20.3. D-Port & Panel Circuit

SCHEMATIC DIAGRAM - 11

D D-PORT CIRCUIT

—— :+B SIGNAL LINE ▯▯▯:IPOD SIGNAL LINE



SA-PT950P/PC D-PORT CIRCUIT

SCHEMATIC DIAGRAM - 12

E PANEL CIRCUIT

:-B SIGNAL LINE

:+B SIGNAL LINE :MAIN SIGNAL LINE :MUSIC PORT SIGNAL LINE

JK6802 — MUSIC PORT — L6905 J0JBC0000019 — L6904 J0JBC0000019 — R6947 4.7K — C6102 1 — L6102 J0JBC0000019 — L6202 J0JBC0000019 — C6202 1 — R6949 220 — R6948 220 — C6923 0.01 — C6924 0.01 — K6100 0 — R6950 1.2K — C6920 0.033 — R6951 1.2K — C6921 0.033 — W6860 0 — C6930 0 — CHASSIS — MPORT — MPORT-RCH — MPORT-LCH — R-CH — L-CH

FL6901
A2BD00000170
FL DISPLAY

IC6901
C0HBB0000057
DISPLAY DRIVER

R6914 56K — C6906 100P — R6927 68 — R6916 68 — R6917 68 — W6894 0 — FL_IC_IN — FL_IC_CLK — FL_IC_STB — SW+5V1 — W6857 0 — C6917 100P — C6916 100P — C6919 100P — C6913 560/3 — C6911 0.01 — C6910 6.3V100 — W6861 0 — C6909 0.01 — Z6900 B3RAD0000143 REMOTE SENSOR — R6934 47 — C6818 10/47 — W6862 0 — LED1 — Q6903 B1GDCFJJ0047 LED DRIVE — Q6901 B1GBCFJN0033 LED DRIVE CONTROL

R6939 0 — R6940 0 — W6855 0 — R6935 470 — D6910 B0BCZR4A0006 — C6905 50V10 — C6903 50V10 — F-1 — F+1 — -VP1 — L6903 J0JBC0000019 — R6938 22K — C6925 0.01 — W6859 0 — W6853 0 — F1 — F2

IC6106
C0ABBB000230
OP AMP

R6132 15K — R6131 22K — C6186 1 — R6290 3.3M — R6190 47K — C6185 1 — C6187 15P — C6183 1 — R6191 220 — W6856 0 — C6189 1 — C6288 150P — R6291 150K — D6100 — R6292 100 — R6192 47K — C6184 10 — C6283 0.1 — D6101 — D6102 B0BCSR000009 — D6100 - D6101 B0ACCK000005

Q6103 B1ADCE000012 MUTING — R6231 0 — +A7V

Q6111 B1GBCFJJ0051 MUTING CONTROL — R6195 10K — R6197 2.2K — ACS_MUTE — R6193 1.8K — Q6110 B1GBCFJJ0051 INVERTER — R6194 56K — R6294 2.2K — R6293 27K — C6284 1 — Q6202 B1GDCFGA0018 BUFFER — -A7V — Q6102 B1ABEB000002 MUTING — VREF — ACS — RMT1

JK6801 — HEADPHONE — R6810 6.8K — L6201 J0JBC0000019 — L6101 J0JBC0000019 — R-CH — L-CH — HP-RCH1 — HP-LCH1 — C6101 0.047 — C6201 0.047 — C6801 0.1 — L6801 J0JBC0000019 — C6931 0.01 — C6933 0.1

R6801 4.7K — R6802 2.7K — R6960 2.2K — R6812 1.8K — R6803 1.2K — R6804 1K — R6805 1K — W6854 0 — KEY21 — S6806 DISC SKIP — S6805 DISC EXC — S6808 OPEN/CLOSE — S6807 SELECTOR — S6804 STOP — S6803 FORWARD — S6802 BACKWARD — S6801 PLAY

R6809 82K — R6807 22K — W6851 0 — W6858 0 — JOG_A1 — JOG_LED — JOG_B1 — R6958 68 — R6959 10K — D6907 — D6907 B3AEA0000058 AQUA BLUE LED — C6922 0.01 — C6932 0.1 — C6806 100P — C6805 100P — S6809 SHUTTLE — S6810 JOG/DIAL

CN6902 — HP-RCH1 — HP-LCH1 — -A7V — +A7V — ACS_MUTE — ACS — KEY21 — JOG_B1 — JOG_A1 — JOG_LED — MPORT-LCH — MPORT-RCH — -VP1 — FL_IC_STB — FL_IC_CLK — FL_IC_IN — SW+5V1 — F-1 — F+1 — RMT1 — VREF — KEY11 — AGND — DGND — -7V — +7V — ACS — KEY2 — JOG_B — JOG_A — DISC1_LED — MPORT-LCH — AGND — MPORT-RCH — HPOUT_MUTE — -VP — FL_IC_DATA — SW_+5V — F- — F+ — RMT — KEY1

TO K TRAY CIRCUIT (CN7002) IN SCHEMATIC DIAGRAM - 17

H6801 — KEY11 — MPORT — DGND — LED1 — LED2 — LED3 — LED4 — LED5

TO F KEY CIRCUIT (H6901) IN SCHEMATIC DIAGRAM - 18

SA-PT950P/PC PANEL CIRCUIT

20.4. D-Amp & SMPS Circuit

SCHEMATIC DIAGRAM - 13

H D-AMP CIRCUIT

:+B SIGNAL LINE :-B SIGNAL LINE :MAIN SIGNAL LINE

IC5300
C1BA00000487
AUDIO DIGITAL POWER AMP

IC5500
C0JBAB000902
INVERTER GATE
(CLOCK GENERATOR)

IC5501
C0JBAF000716
D-TYPE FLIP-FLOP

TO D-AMP SECTION (2/2)

TO FAN

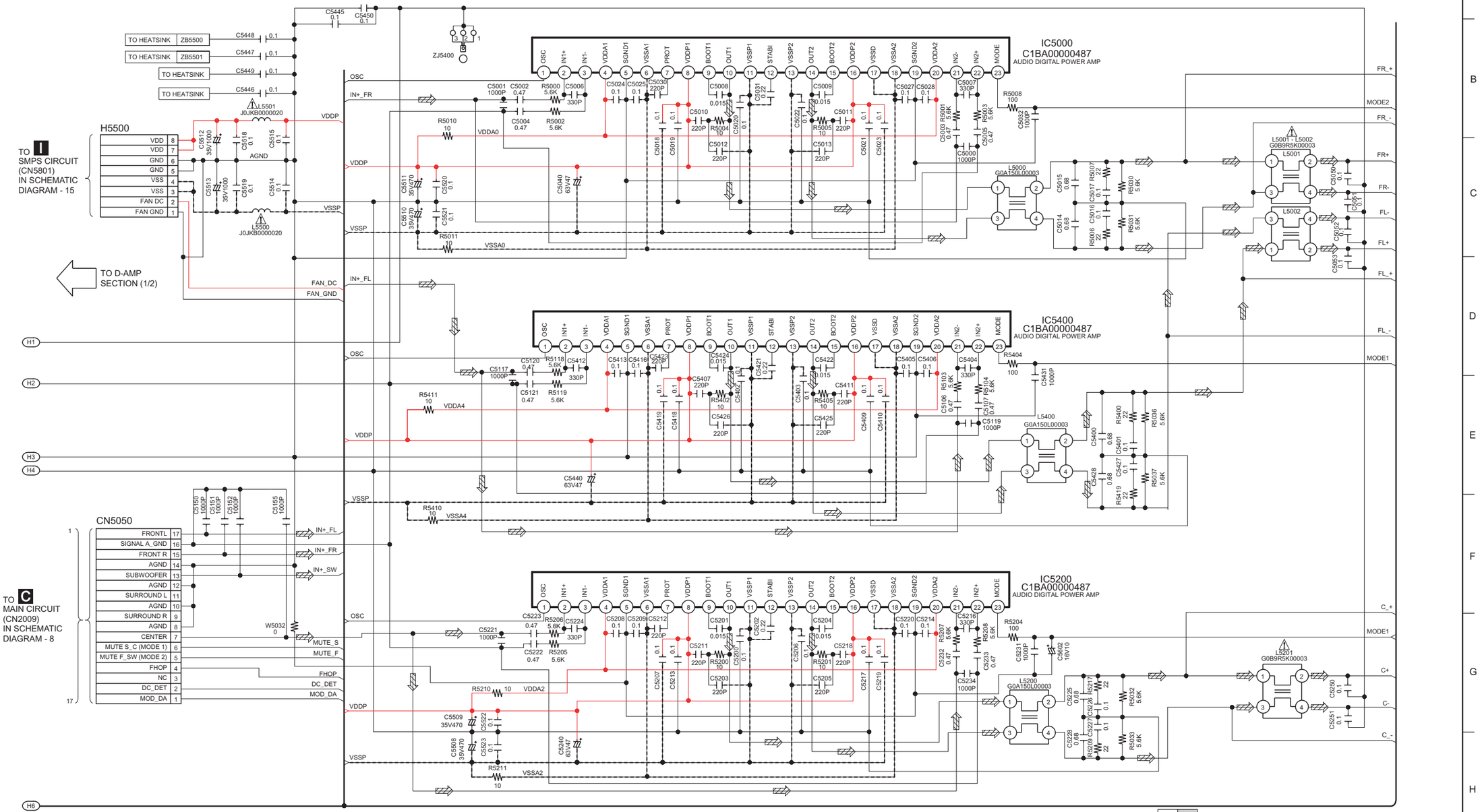
TO SPEAKERS

1/2 2/2 SA-PT950P/PC D-AMP CIRCUIT

SCHEMATIC DIAGRAM - 14

H D-AMP CIRCUIT

—— :+B SIGNAL LINE - - - :-B SIGNAL LINE ▨ :MAIN SIGNAL LINE



1/2 2/2 SA-PT950P/PC D-AMP CIRCUIT

SCHEMATIC DIAGRAM - 15

I SMPS CIRCUIT

:+B SIGNAL LINE :-B SIGNAL LINE

TO H D-AMP CIRCUIT (H5500) IN SCHEMATIC DIAGRAM - 14

CN5801: +30V_SENSE 8, +30V_SENSE 7, GND 6, GND 5, -30V_SENSE 4, -30V_SENSE 3, FAN_13V 2, FAN_GND 1

DCDET, FAN_18V, -30V_SENSE, +30V_SENSE, -13V, SYS6V, PCONT

Q5861 - Q5862
B1ABCF000176
TRANSFORMER TEMP DETECT

Q5860
B1ADCF000001
TRANSFORMER TEMP DETECT

D5801
B0HBSM000043

T5701
ETS42BM15GAD
MAIN TRANSFORMER

-30V, AMPGND, +30V, +FAN 18V, +18V, GND, -12V, VIN, DRAIN

TO SMPS SECTION (2/2)

QR5801
B1GBCFJN0033
DC DETECT

ZJ5801

D5802
B0HBSM000043

D5807
B0ACCK000005

D5810
B0HPU0000012

D5804
B0EAMM000057

D5805
B0EAMM000057

ZJ5802

CN5802: AM_BP 11, PCONT 10, DC18V 9, DC18V 8, +18V,-12V_GND 7, +18V,-12V_GND 6, -13V 5, DCDET 4, SYS_GND 3, SYS6V 2, SYNC 1

TO C MAIN CIRCUIT (CN2004) IN SCHEMATIC DIAGRAM - 10

Q5803
2SC3940ARA
SWITCHING

Q5720
2SC3940ARA
CURRENT LIMITING SWITCH

Q5722
B1ABCF000176
CURRENT LIMITING SWITCH

Q5721
B1ADCF000001
SWITCHING

D5731 B0EAMM000057

D5726 B0EAKM000117

D5729 B0EAMM000057

D5724 B0EAMM000057

D5721 B0BC01700015

D5722 B0BC01700013

D5728 B0ACCK000005

D5723 B0ACCK000005

D5702 B0ZAZ0000052

D5725 B0JAME000029

D5732 B0BC02900004

IC5701
C0DAAMH00004
SWITCHING REGULATOR
1 FB, 2 S, 3 D, 4 VCC, 5 GND

IC5801
C0DABFC00002
SHUNT REGULATOR

Q5802
B1ABCF000176
FEED BACK CONTROL

D5806
B0BC7R500001

PC5720
B3PBA0000402
FEED BACK

PC5701
B3PBA0000402
FEED BACK

QR5810
B1GBCFLL0037
INVERTER

ZJ5721 J0JKE0000020

ZJ5803

C5700
F1BAF1020020
1000P

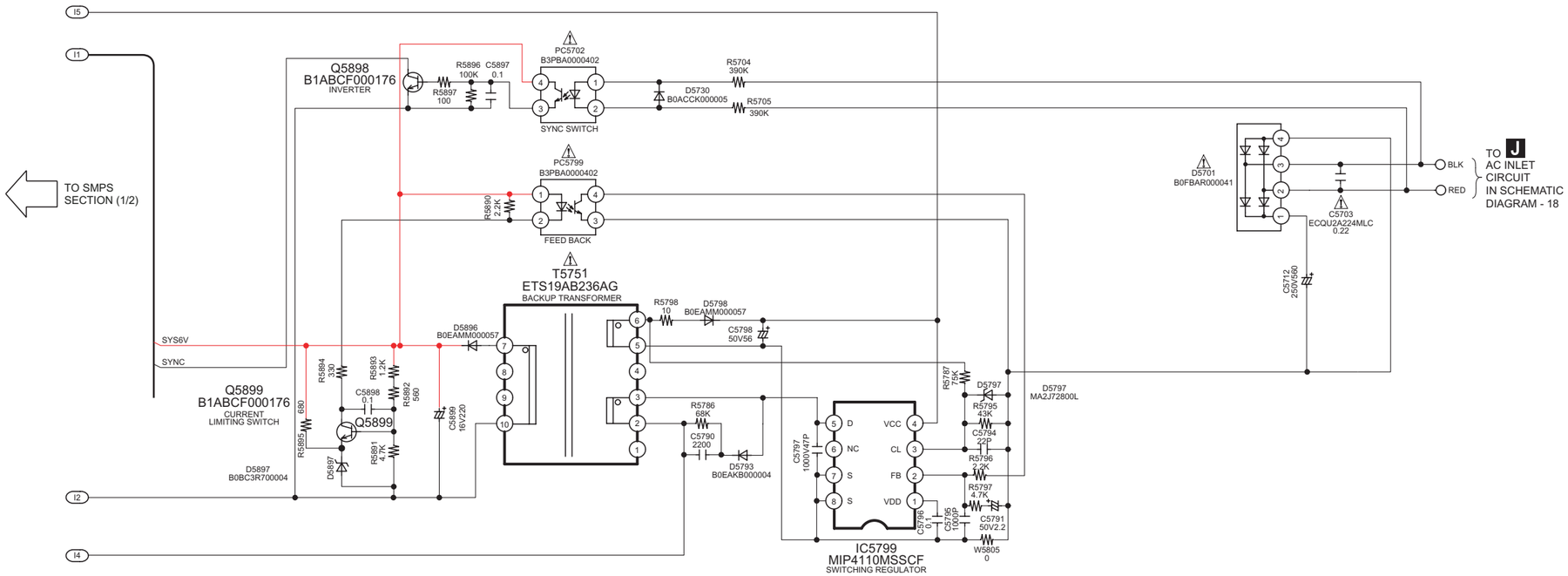
W5806 0 → I5

1/2 2/2 SA-PT950P/PC SMPS CIRCUIT

SCHEMATIC DIAGRAM - 16

I SMPS CIRCUIT

:+B SIGNAL LINE :-B SIGNAL LINE



1/2 2/2 SA-PT950P/PC SMPS CIRCUIT

20.5. Tray, Key, Wireless Adapter, AC-Inlet & Loading Motor Circuit

SCHEMATIC DIAGRAM - 17

K TRAY CIRCUIT

:-B SIGNAL LINE

:+B SIGNAL LINE

:MAIN SIGNAL LINE

:MUSIC PORT SIGNAL LINE

TO C MAIN CIRCUIT (CN2007) IN SCHEMATIC DIAGRAM - 8

CN7001

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
HP-RCH	AGND	HP-LCH	-7V	+7V	ACS_MUTE	ACS_IN	KEY2	JOG_B	JOG_A	JOG_LED	DISC1_LED	MPORT-LCH	AGND	MPORT-RCH	HPOUT_MUTE	-VP	FL_IC_STB	FL_IC_CLK	FL_IC_DAT	SW+5V	F-	F+	RMT	VREF	DGND	KEY1	DGND

Q7101
B1GFGCAA0001
MUTING

R7201 2.2K

R7101 2.2K

CN7002

1	HP-RCH	28	
	AGND	27	
	HP-LCH	26	
	-7V	25	
	+7V	24	
	ACS_MUTE	23	
	ACS_IN	22	
	KEY2	21	
	JOG_B	20	
	JOG_A	19	
	JOG_LED	18	
	DISC1_LED	17	
	MPORT-LCH	16	
	AGND	15	
	MPORT-RCH	14	
	HPOUT_MUTE	13	
	-VP	12	
	FL_IC_STB	11	
	FL_IC_CLK	10	
	FL_IC_DAT	9	
	SW+5V	8	
	F-	7	
	F+	6	
	RMT	5	
	VREF	4	
	DGND	3	
	KEY1	2	
28	DGND	1	

TO E PANEL CIRCUIT (CN6902) IN SCHEMATIC DIAGRAM - 12

TO C MAIN CIRCUIT (CN2011) IN SCHEMATIC DIAGRAM - 8

CN7004

1	2	3	4	5	6	7	8	9	10
DISC_SENSOR	PULSE_SENSOR	POSITION_SENSOR	MGND	MGND	TURN_FWD	TURN_REV	PWM	C+9V	C+9V

CN7003

11	DGND	
10	POSITION_SENSOR	
9	DGND	
8	PULSE_SENSOR	
7	DGND	
6	DISC_SENSOR	
5	DGND	
4	PHOTO_DRIVER	
3	DGND	
2	TRV+	
1	TRV-	

TO N SENSOR CIRCUIT (CN9102) IN SCHEMATIC DIAGRAM - 19

L7753 J0JBC0000015

L7752 J0JBC0000015

L7750 J0JBC0000015

R7780 330

R7750 330

W7502 0

C7001 0.1

C7002 16/47

D7750 - D7751 B0ECKM000016

D7750

D7751

R7781 10K

R7752 4.7K

R7753 330

Q7750
B1GBCFJJ0051
MOTOR DRIVE

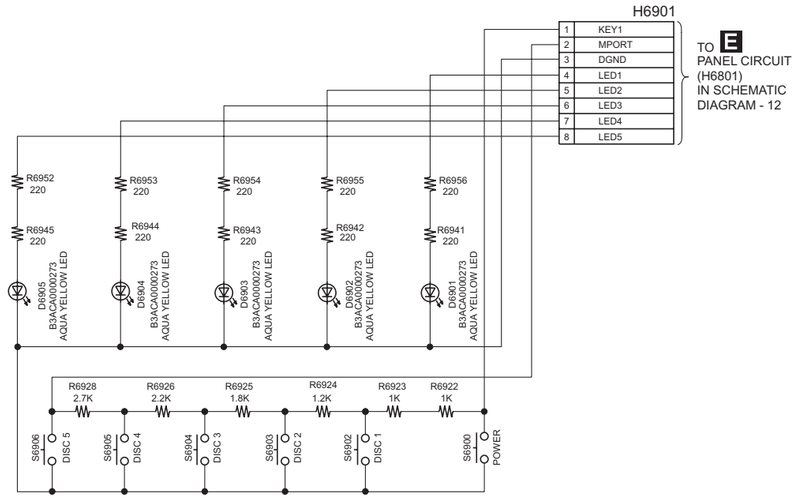
IC7750
C0GAG0000007
TRAY MOTOR DRIVE

1	VREF	
2	OUT2	
3	RINF	
4	OUT1	
5	VM	
6	VCC	
7	F-IN	
8	GND	
9	R-IN	

SA-PT950P/PC TRAY CIRCUIT

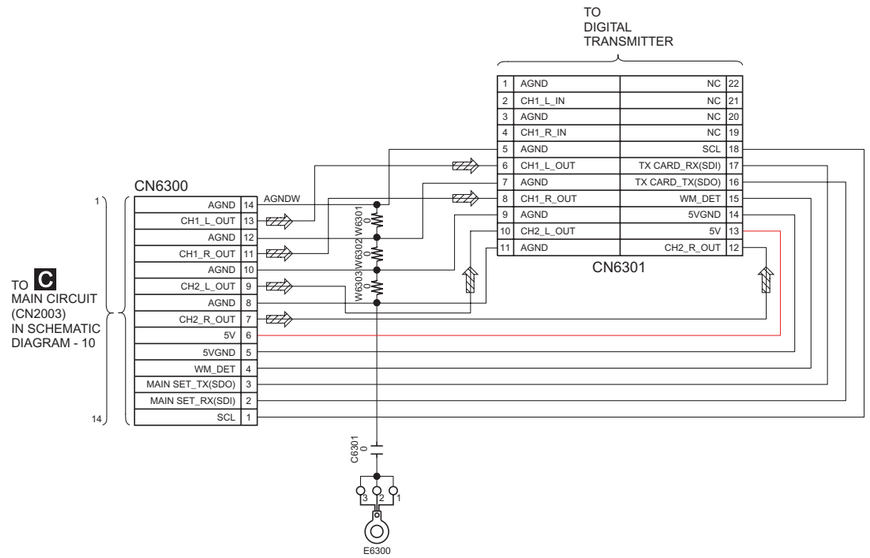
SCHEMATIC DIAGRAM - 18

F KEY CIRCUIT

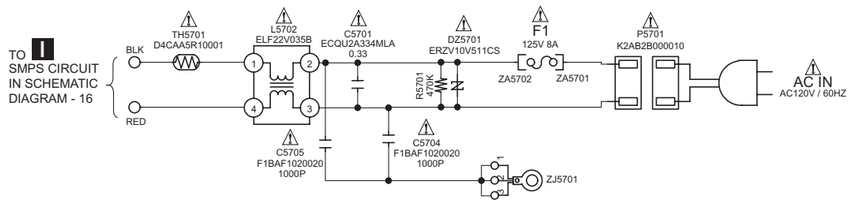


G WIRELESS ADAPTER CIRCUIT

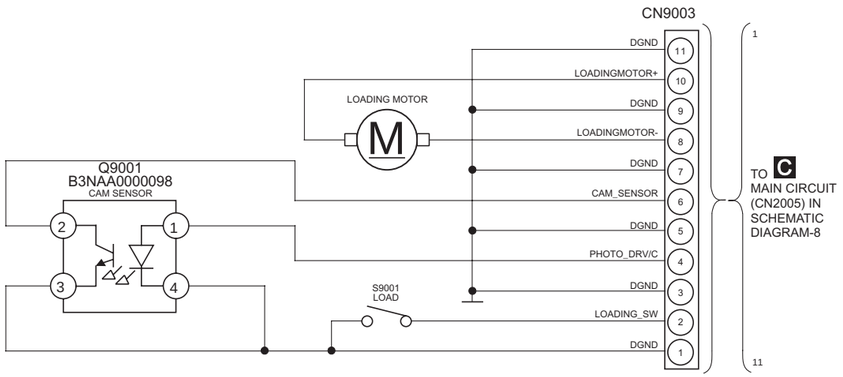
:+B SIGNAL LINE :MAIN SIGNAL LINE



J AC-INLET CIRCUIT



L LOADING MOTOR CIRCUIT

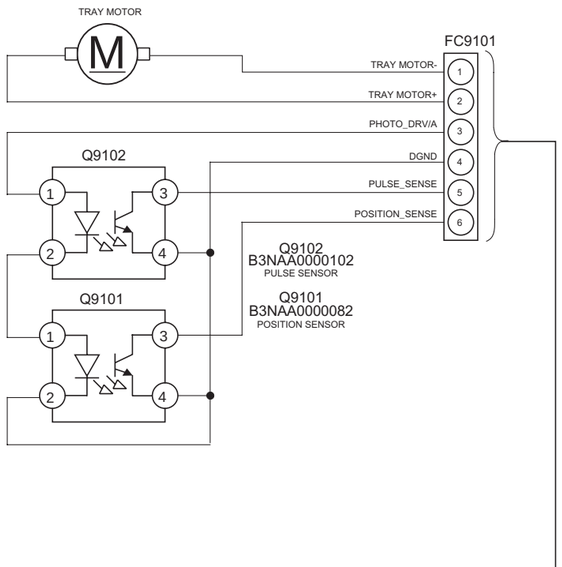


SA-PT950P/PC KEY/ WIRELESS ADAPTER/ AC-INLET/ LOADING MOTOR CIRCUIT

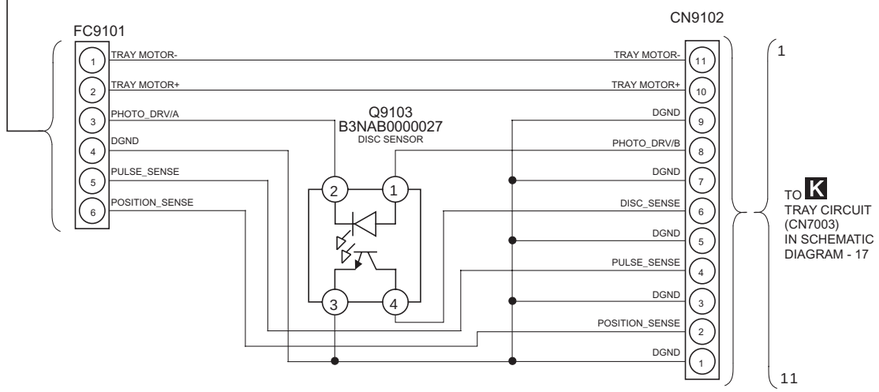
20.6. Tray Motor, Sensor & Optical Pickup Unit

SCHEMATIC DIAGRAM - 19

M TRAY MOTOR CIRCUIT

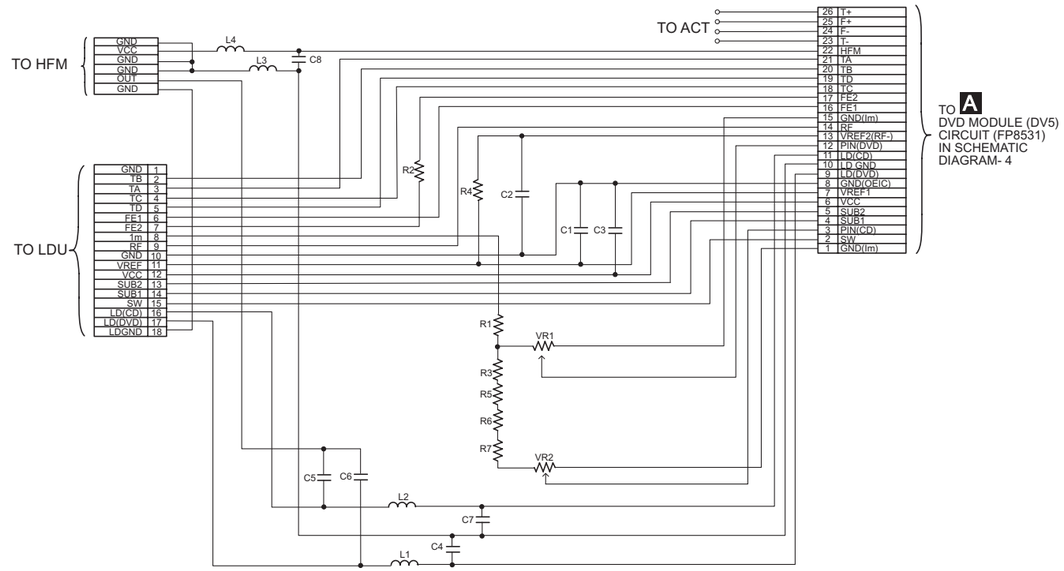


N SENSOR CIRCUIT



OPTICAL PICKUP UNIT CIRCUIT

(FOR REFERENCE ONLY)

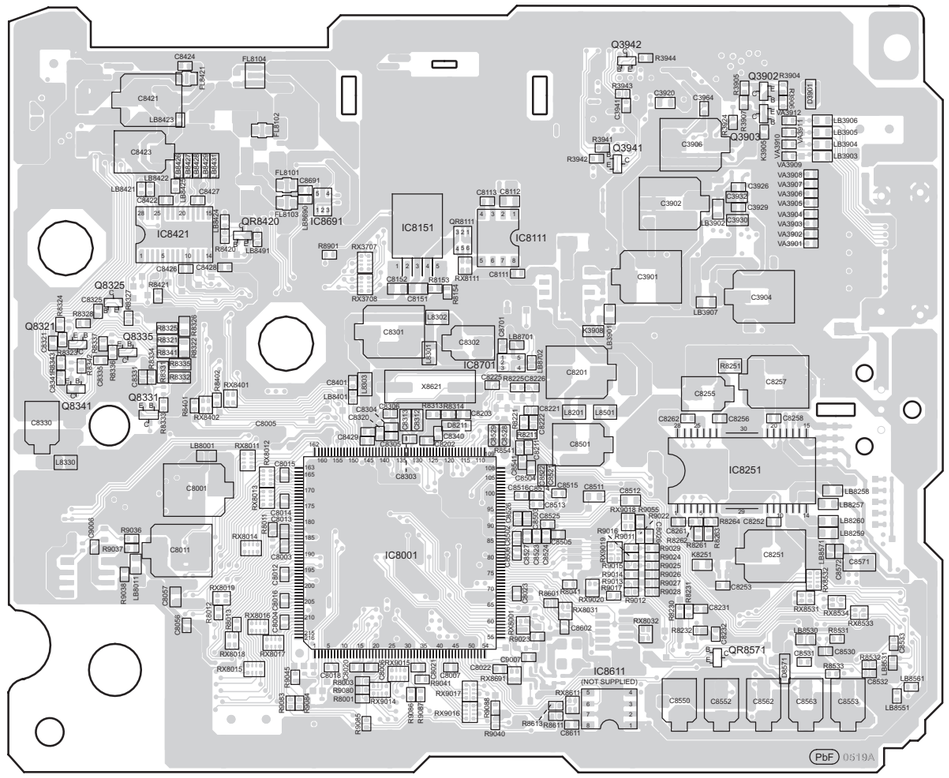


SA-PT950P/PC TRAY MOTOR/ SENSOR/ OPTICAL PICKUP UNIT CIRCUIT

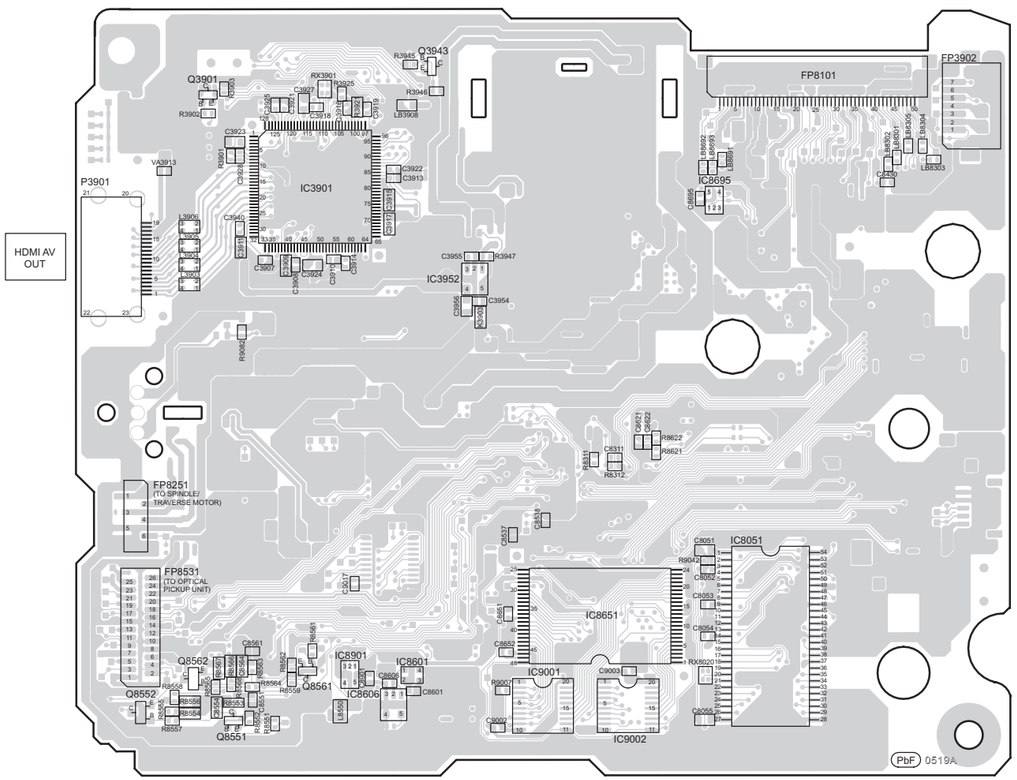
21 Printed Circuit Board

21.1. DVD Module P.C.B.

A DVD MODULE P.C.B (REPX0563A)



(SIDE A)



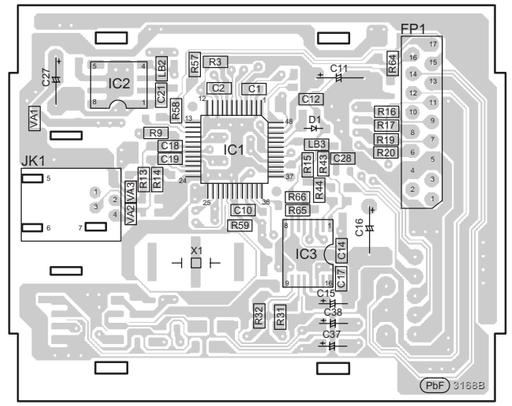
(SIDE B)

SA-PT950P/PC
DVD MODULE P.C.B.

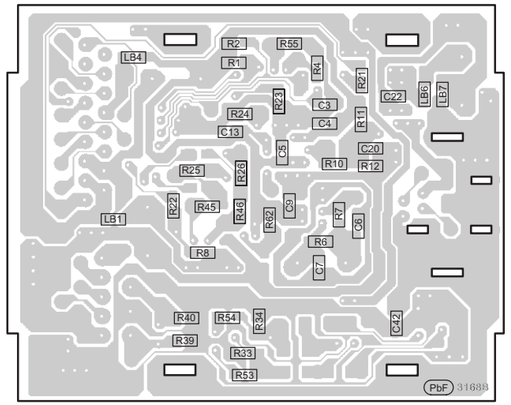
21.2. XM Module, D-Port & AC-Inlet P.C.B.

B XM MODULE P.C.B. (REPX0590A)

XM

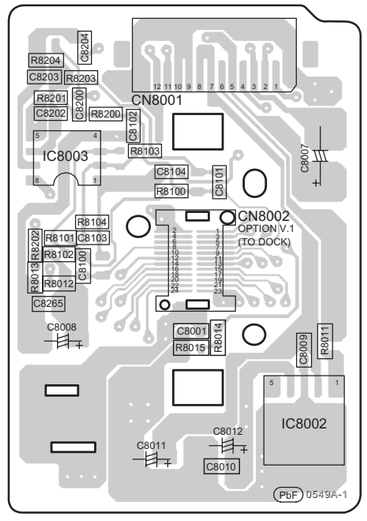


(SIDE A)

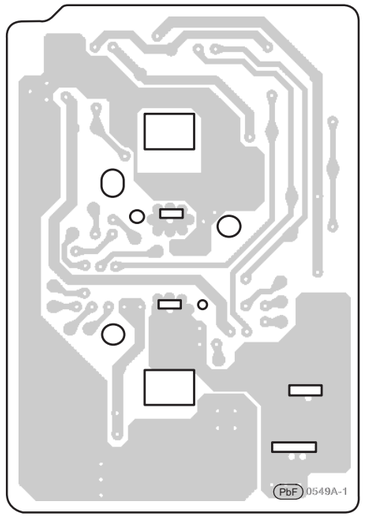


(SIDE B)

D D-PORT P.C.B. (REPX0601A)

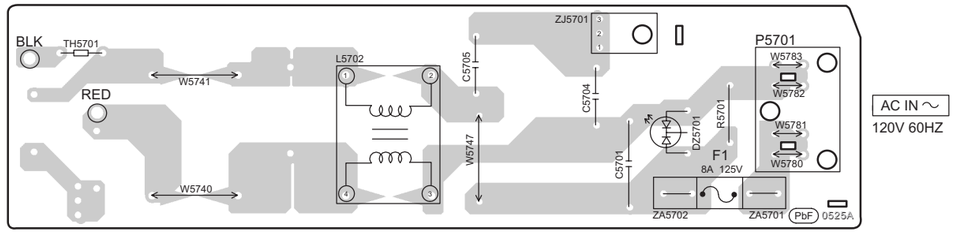


(SIDE A)



(SIDE B)

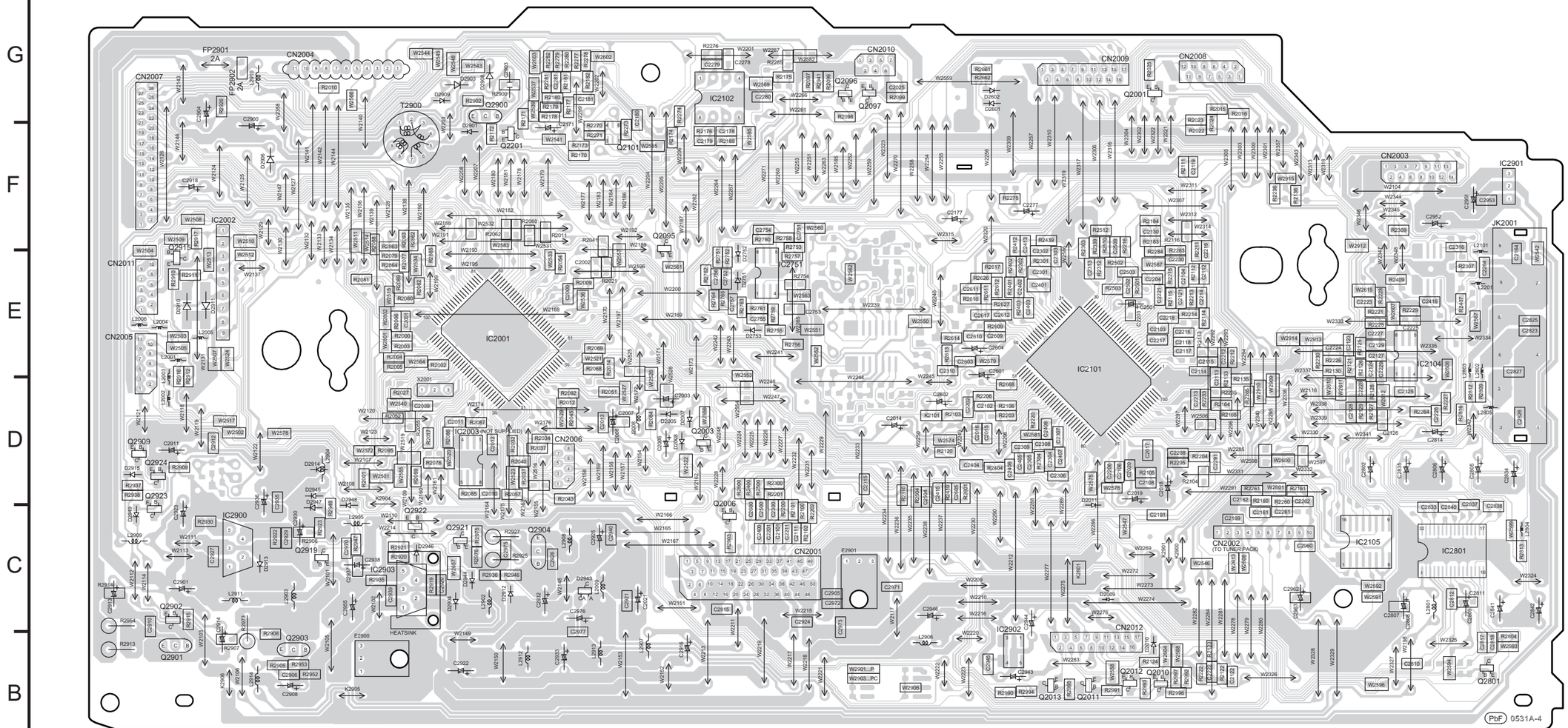
J AC-INLET P.C.B. (REPX0568A)



SA-PT950P/PC
XM MODULE/D-PORT/AC-INLET P.C.B.

21.3. Main P.C.B.

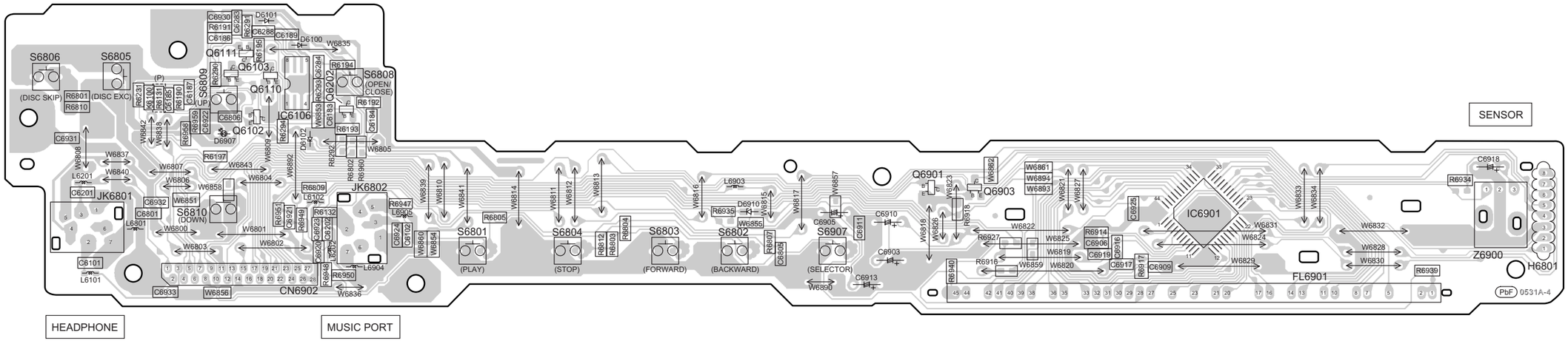
C MAIN P.C.B. (REPX0574A...P)
(REPX0574B...PC)



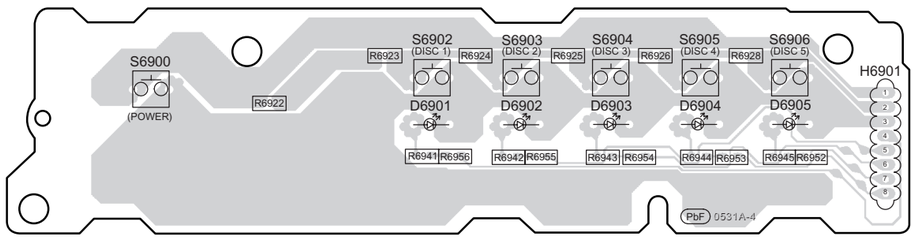
SA-PT950P/PC
MAIN P.C.B.

21.4. Panel, Key & Wireless Adapter P.C.B.

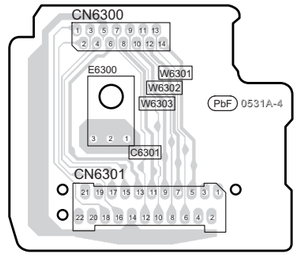
E PANEL P.C.B. (REPX0574A...P) (REPX0574B...PC)



F KEY P.C.B. (REPX0574A...P) (REPX0574B...PC)

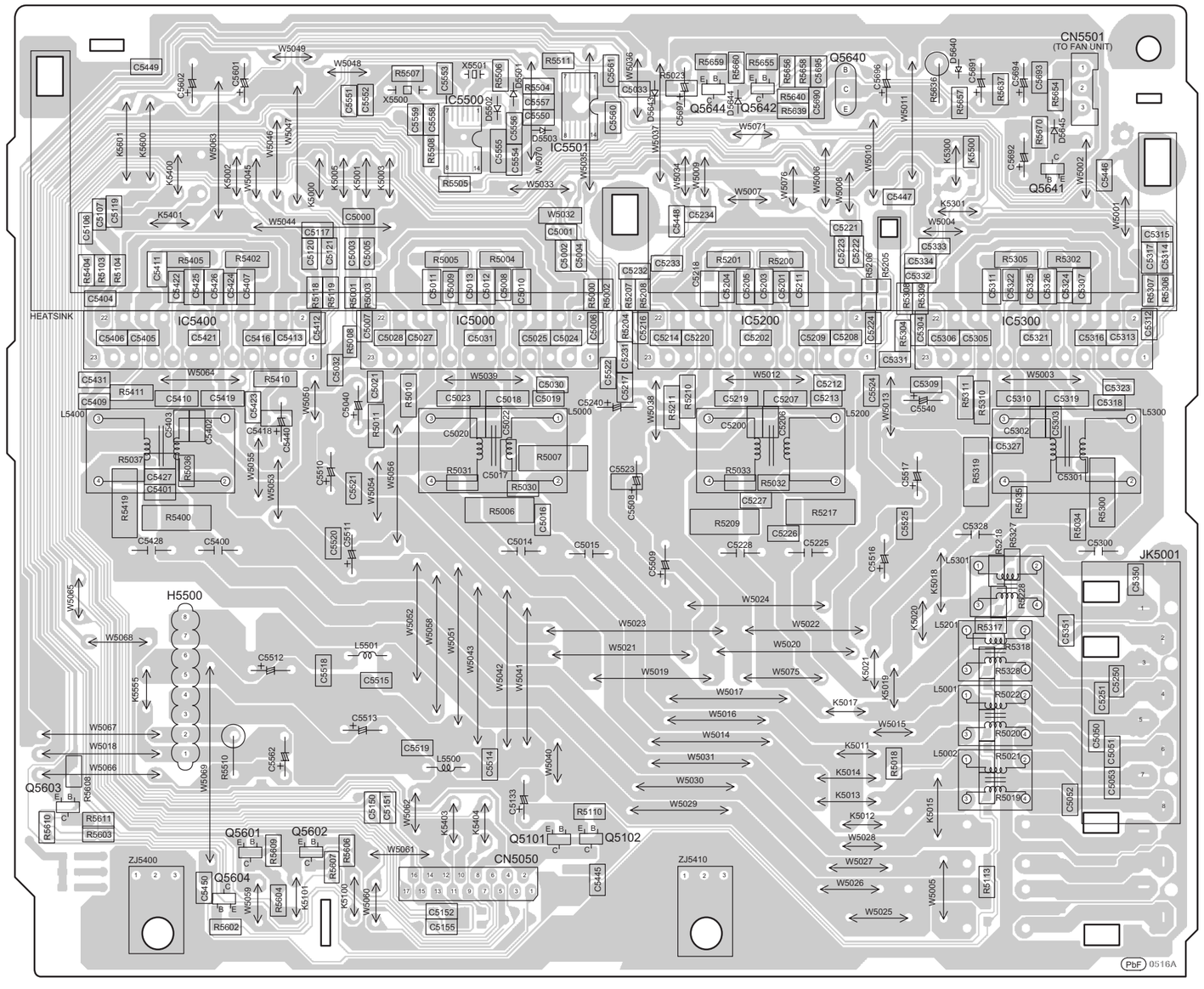


G WIRELESS ADAPTER P.C.B. (REPX0574A...P) (REPX0574B...PC)



21.5. D-Amp P.C.B.

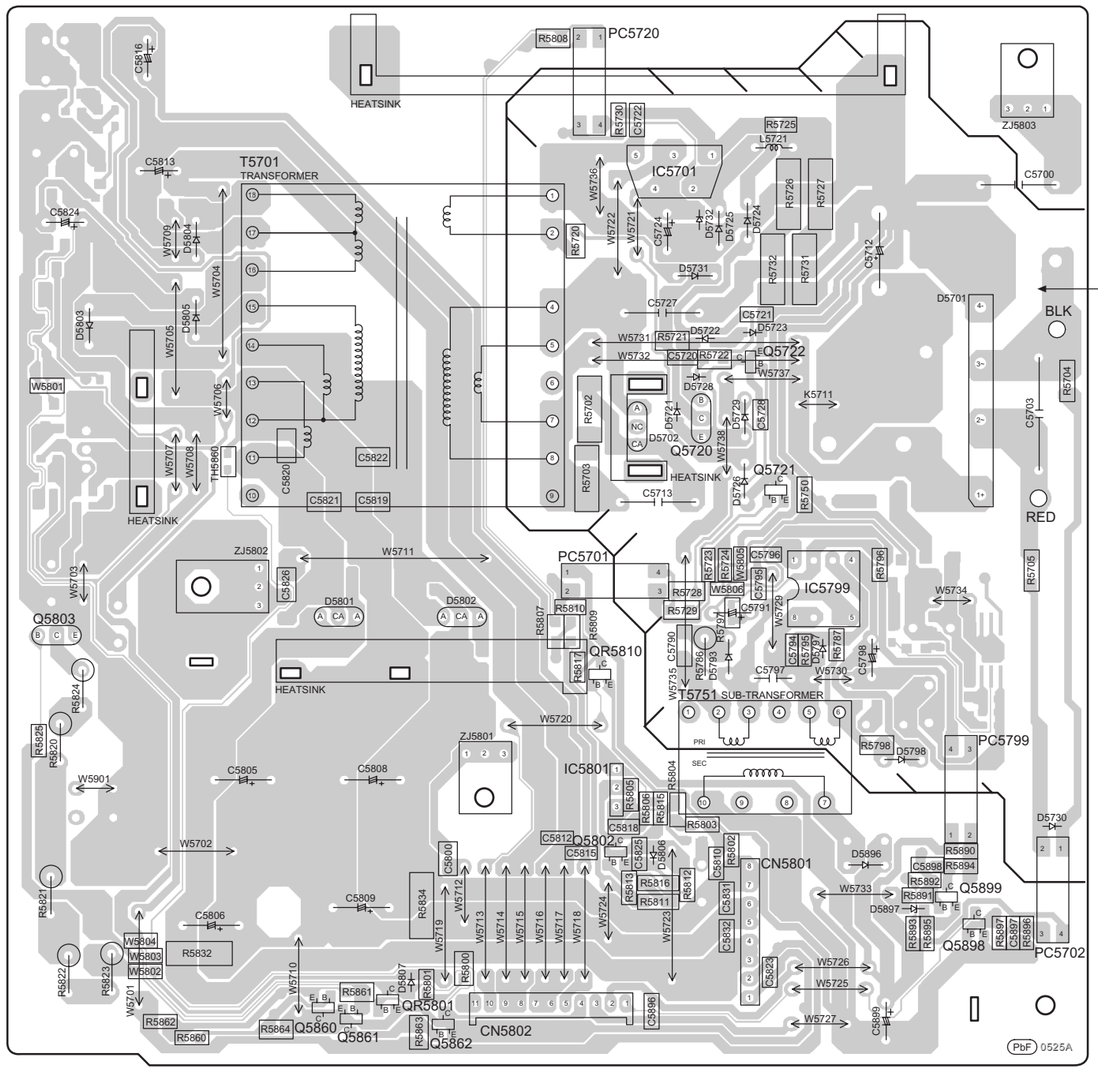
H D-AMP P.C.B. (REPX0560A)



SA-PT950P/PC
D-AMP P.C.B.

21.6. SMPS P.C.B.

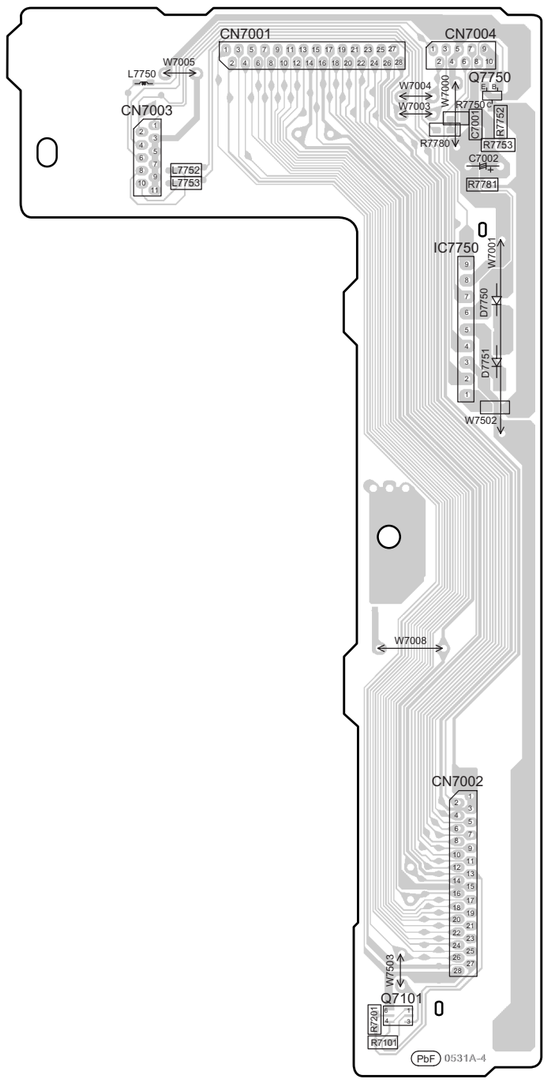
I SMPS P.C.B. (REPX0568A)



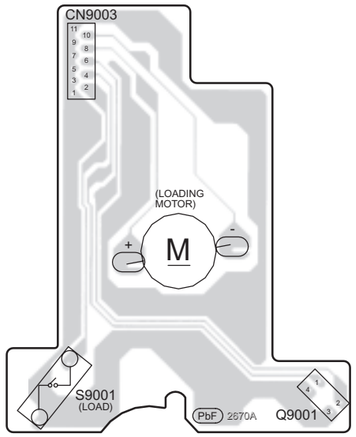
SA-PT950P/PC
SMPS P.C.B.

21.7. Tray, Loading Motor, Tray Motor & Sensor P.C.B.

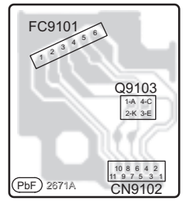
K TRAY P.C.B. (REPX0574A...P)
(REPX0574B...PC)



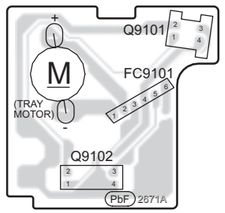
L LOADING MOTOR P.C.B. (REP3465B)



N SENSOR P.C.B. (REP3466B)



M TRAY MOTOR P.C.B. (REP3466B)



SA-PT950P/PC
TRAY/LOADING MOTOR/TRAY MOTOR/SENSOR P.C.B.

22 Basic Troubleshooting Guide

22.1. Basic Troubleshooting Guide for Traverse Unit (DVD Module P.C.B)

Problems	Checking Points	Checking Components
1) Distorted picture or abnormal sound is head during the initialization	a) Check SDRAM address, data bus, CLK and other control signals waveform	IC8051
	b) Check video signals	LB8301, R8321, R8322, LB8302, R8325, R8326
	c) Check audio DAC circuitry * Compare the above with OK condition HDMI module P.C.B.	IC8421 *Check for solder short and/or component missing/damaged
2) No TOC / Long TOC	a) Check motor driver circuitry (+5V)	IC8251 Pin 8, 21
	b) Check laser drive circuitry (Voltages & current)	Q8551, Q8552, Q8561, Q8562
	c) Check LSI IC connection to motor drive circuitry *Compare the above with OK condition HDMI Module P.C.B.	IC8001 Pin 144 ,145 * Check for solder short and/or component missing/damaged
3) Disc not spinning 4) Traverse not moving 5) Traverse and spindle abnormal movement	a) Check connection from HDMI Module to Traverse unit	FP8251
	b) Check motor driver circuitry on the voltages and control signals *Compare the above with OK condition HDMI Module P.C.B	IC8251 *Check for solder short and/or component damaged
6) Cannot read the disc but spindle motor is spinning - Cannot read CD/DVD	a) Check laser drive circuitry (voltages and current) - Check CD Laser Drive - Check DVD Laser Drive * Check voltages and LD current and compare with OK condition HDMI Module P.C.B.	Q8551, Q8552, LB8531 (For DVD Laser Drive current) Q8561, Q8562, LB8561 (For CD Laser Drive current)
7) Block Noise during play	a) Check SDRAM address and data bus signal	IC8051
8) Jitter out of specification	a) Check LD current b) Check OPU (Change to other unit and confirmed operating condition)	OPU Unit (Traverse unit), FPC connection

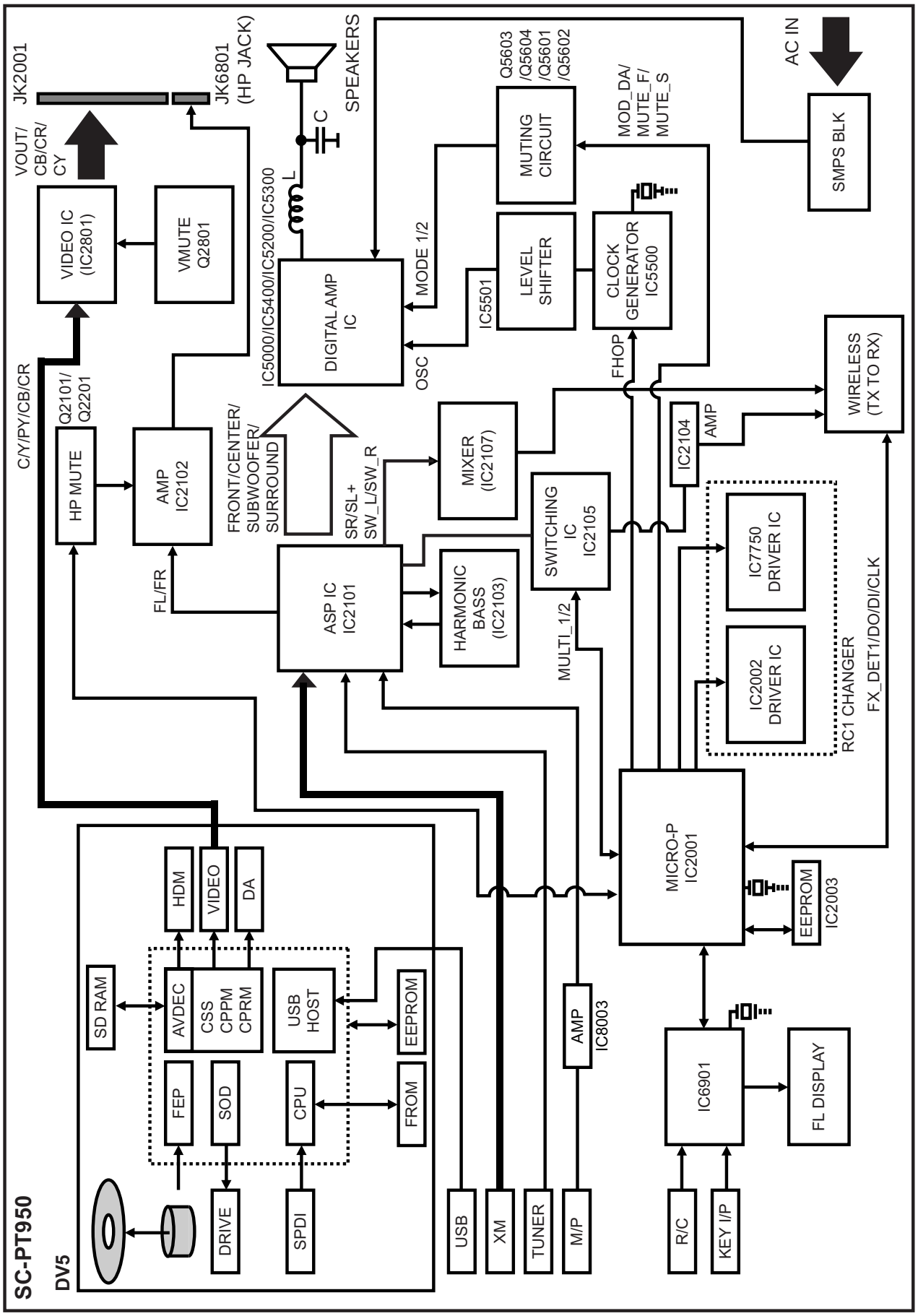
22.2. Basic Troubleshooting Guide for HDMI AV output

Problems	Checking Points	Checking Components
1) TV does not have any display. Set FL display shows U702/U703	1) Check setting of the set in Setup Menu whether the HDMI Video output is turned On	*This year HDMI always ON. No need check Setup Menu. If no resolution selection GUI, then only check SETUP.
	2) +5V Supply to the TV	IC3952 (Pin 4)
	3) HDMI Connector Solderability condition	P3901
	4) HDMI Output TDMS signal lines (IC3901) - Data (Pin 72, 73, 76, 77, 80, 81) - Clock (Pin 10,12)	 L3903, L3904, L3905, L3906
	5) HDMI Transmitter communication lines to TV - Data, SDA (Pin 120, IC8001) - Clock, SCL (Pin 121, IC8001)	 LB3905, R3905, Q3902, R3904 LB3904, R3907, Q3903, R3906
	6) HDMI Transmitter communications from LSI (IC8001)	RX3901
	7) Local Port Slave Address setting resistor	R3921
	8) HDMI Transmitter +3. 3V Supply	LB3901, IC3901 (Pin 26, 42, 47, 52, 70, 84, 100, 106, 115)
	9) HDMI Transmitter +1.2V Supply	IC3901 (Pin 5, 26, 47, 42, 55, 75, 85, 102, 109, 116, 123), LB3908, IC8151 (Pin 2, 4)
	10) HDMI Up-Con +3.3V Supply	LB3901
	11) HDMI Pixel Clock Output from Up-Con to HDMI Transmitter	R8902
	12) Up-Con IC I2C Data and Clock Line	RX3706
	13) Hot-Plug Signal	LB3906, R3902, R3903, Q3901, D3901
	14) TDMS Output swing amplitude control resistor	R3901
	15) Host Interface External Input Clock from LSI (IC8001) to Up-Con IC (IC3901) – OSC27M	LB8702
	16) Video Data Lines from LSI (IC8001) to Up-Con (IC3901)	RX3707, RX3708

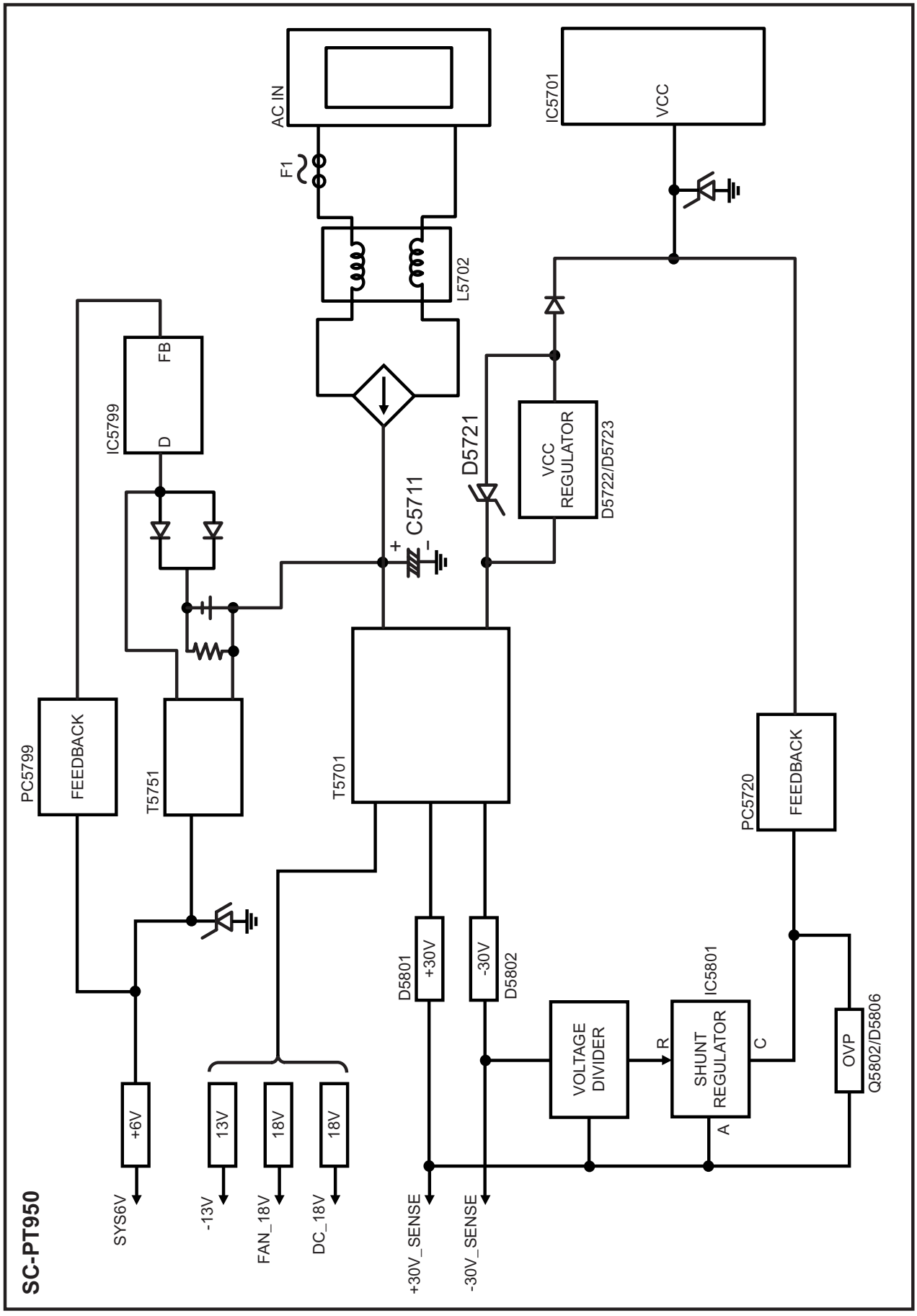
Problems	Checking Points	Checking Components
2) When switching the video output mode from 480P to 720p/1080i, TV display becomes blank	1) Supply for Up-Con (IC3901) - Pin 9, 124 2) GND for Up-Con - Pin 7, 125 3) Check for capacitor short to GND	LB3902 C3902, C3928, C3925
3) Color Problem. TV screen is White/Blue/Purple	1) Check digital video data line from LSI (IC8001) to Up-Converter (IC3901), VOUT0-VOUT7.	RX3707, RX3708
4) HDMI got no audio output	1) Audio data lines 2) Check setting of the set in Setup Menu whether the HDMI Audio output is turned ON	R8402, RX8402 * Check for solder short and/or component missing/damaged as well as signal condition.

23 Overall Block for PT950

23.1. SC-PT950 Main Circuit Block



23.2. SC-PT950 SMPS Circuit Block



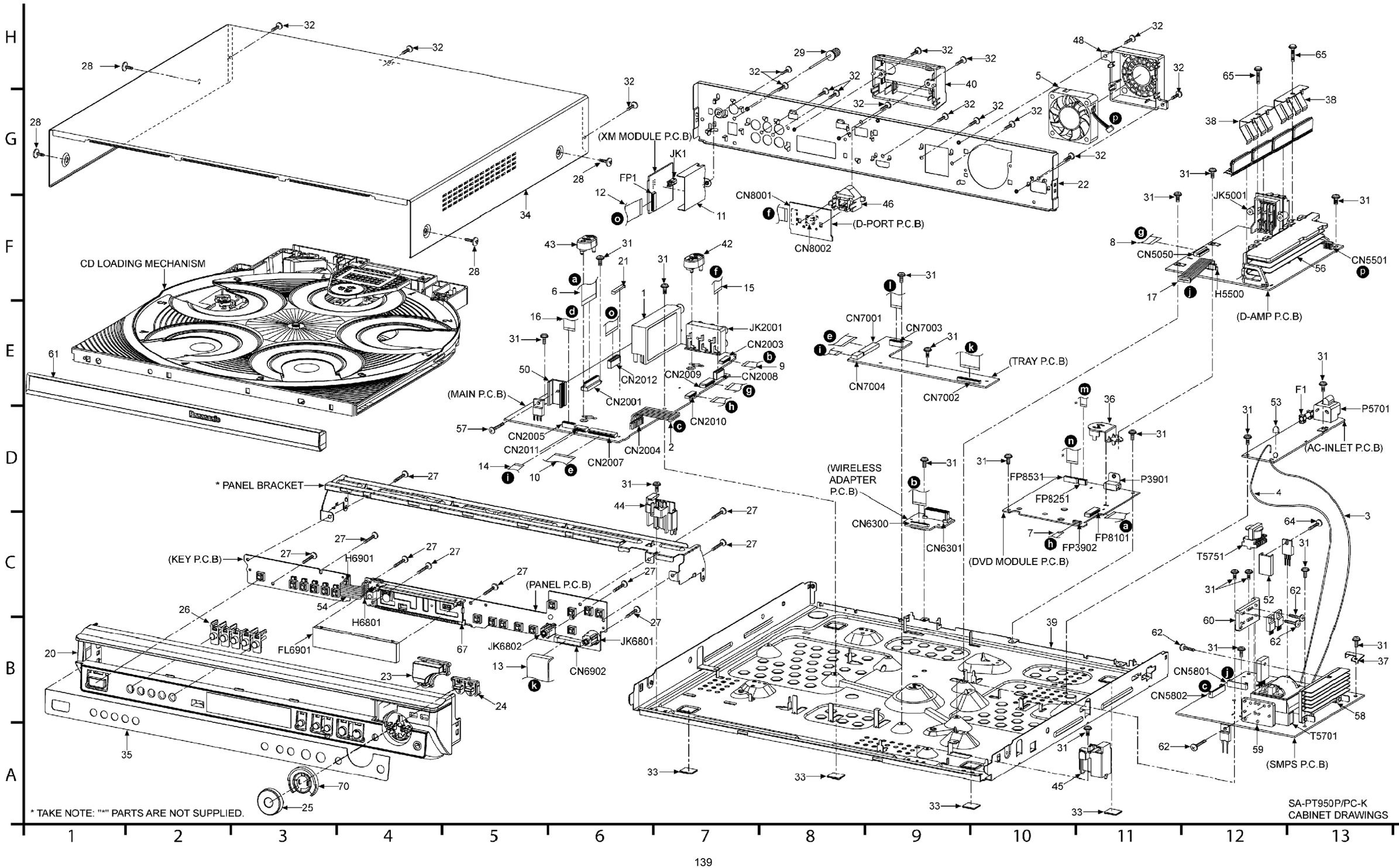
24 Terminal Function of ICs

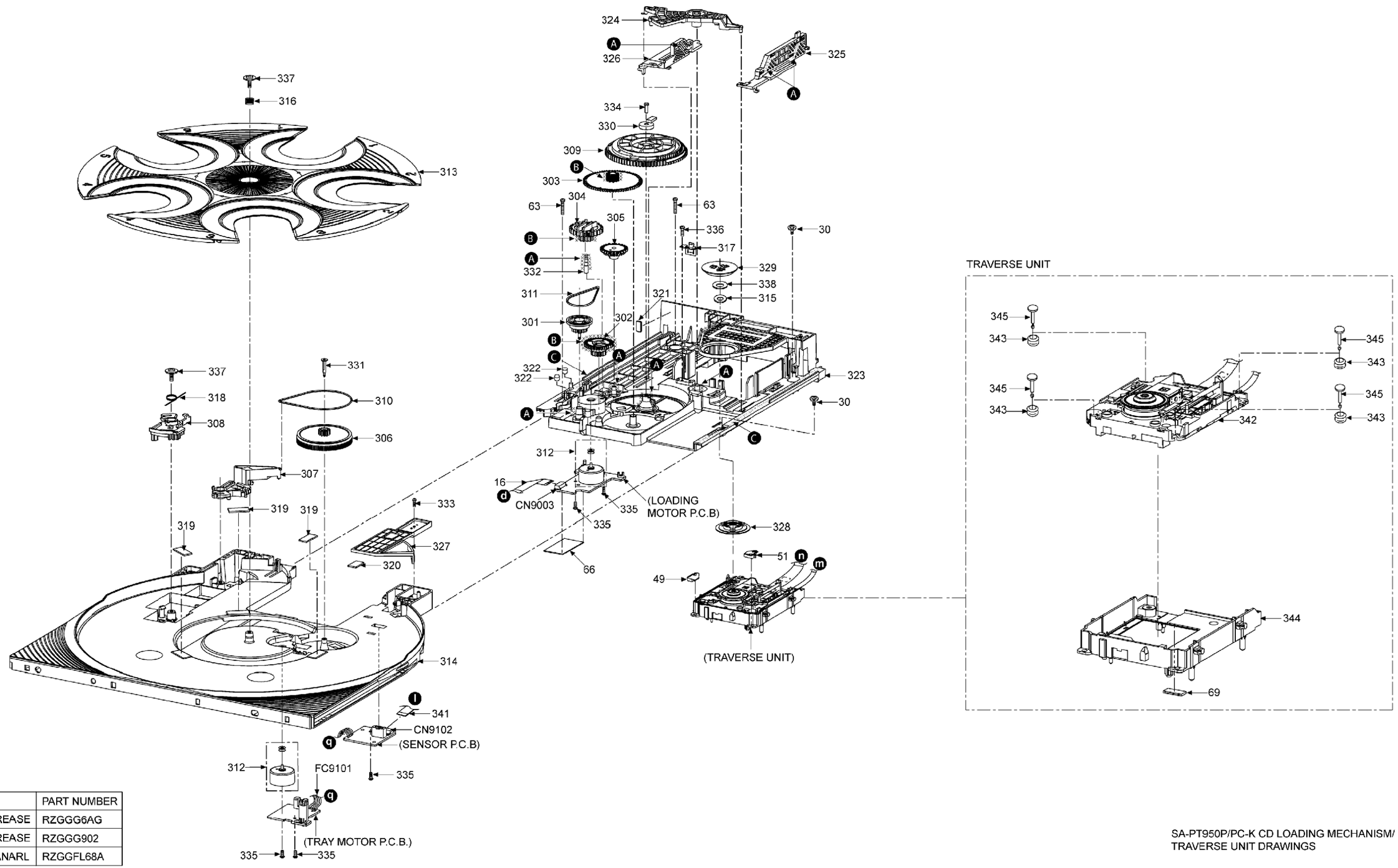
24.1. IC2001 (C2CBYY000442): System Control IC

Pin No.	Terminal Name	I/O	Function
1	LOAD_REV	O	Loading Motor Control (Open/Close-RC1)
2	LOAD_FWD	O	Loading Motor Control (Open/Close-RC1)
3	LOAD (CAM_SW)	I	UP/DOWN Switch (RC1)
4	OPEN_SW	I	OPEN Switch (RC1)
5	FX_DO	O	Wireless Data Output
6	XM_PCONT	O	Power Control of XM Module
7	FX_DI	I	Wireless Data Input
8	BYTE	I	VSS (GND)
9	CNVSS	-	VSS (GND)
10	XM_EN	I	XM Radio Enable (H: Enable; L: Disable)
11	RDS_EN	I	RDS Enable H = Enable, L = Disable)
12	RESET	I	SYSTEM RESET INPUT
13	XOUT	-	MAIN CLOCK OUTPUT (10.0MHZ)
14	VSS	-	GND (0V)
15	XIN	-	MAIN CLOCK INPUT (10 MHZ)
16	VCC	-	POWER SUPPLY (5V)
17	NMI	I	CONNECT TO VCC, EXTERNAL INTERRUPT I/P
18	RMT	I	REMOCON INPUT
19	SYNC	I	AC FAILURE DETECT INPUT
20	PULSE	I	Pulse Sensor Speed Detection (RC1)
21	IPOD_EN	I	iPod Enable (L=Disable, H=Enable)
22	PWM	O	PWM Output for changer
23	EDA	I/O	DATA signal for the EEPROM
24	ECK	O	CLOCK signal for the EEPROM
25	ECS	O	LAT signal for the EEPROM
26	FX_EN	I	Disable/Enable for FX (Wireless) Support
27	XM_RESET	O	XM Module reset
28	DVD_CLK	I	CLK signal for the DVD Module
29	DVD_STAT	I	STATUS signal from the DVD Module
30	DVD_CMD	O	CMD signal for the DVD Module
31	UART_TX	O	iPod/D-Port Data Output
32	UART_RX	I	iPod/D-Port Data Output
33	FX_CLK	O	Wireless Clock
34	FX_DET1	I	RF Change Direction (Wireless Module)
35	XM_SC_TXD	O	XM sys ctrl output (Micon to XM)
36	XM_SC_RXD	I	XM sys ctrl input (XM to micon)
37	TUN_DO	I	Stereo Detect
38	TUN_DI	O	I2C Data for Tuner
39	TUN_CLK	O	I2C Clock for Tuner
40	DVD_PCONT	O	Control Signal for the Power for the DVD MODULE
41	EPM	I	[Flash Connector]
42	DVD_MUTE	I	Signal from DVD module control mute circuit
43	DCDET1	I	DC Detection circuit 1
44	XM_MUTE	I	XM MUTE (L: Mute Off) (H: Mute On)
45	ACS_EN	I	Wide Surround Enable
46	VMUTE	O	Video Mute Control
47	ASP_CLK	O	Clock signal for 6ch VOL ASP
48	ASP_DAT	O	Data signal for 6ch VOL ASP
49	TUN_SD	I	Tuner Station Detect
50	JOG_LED	O	Volume JOG LED
51	XM_ANT_REV	I	XM Antenna Receive (H: Mismatch Antenna) (L: Matching Antenna)
52	HBASS_SW	O	HBASS Control
53	XM_LINK_ ACT	I	XM Link Active (H: Link Active) (L: No Data transfer)
54	MULTI_1	O	Multi Room selector 1
55	MULTI_2	O	Multi Room selector 2
56	POS_SW (INT)	I	Position Sensor (RC1)
57	TURN_FWD	O	Tray Motor Control (Turn - RC1)
58	TURN_REV	O	Tray Motor Control (Turn - RC1)
59	SENS1	I	Digital Amp Output Sensor 1
60	ACKIN	I	Acknowledge Signal from iPod
61	OPT_EN	I	Optical IN Enable (L=Disable, H=Enable)
62	VCC	-	POWER SUPPLY 5.0V
63	DC_DET2	I	DC Detection Circuit 2
64	VSS	-	GND (0V)
65	XM_DAC_RST	O	XM DAC RESET
66	EXP_STROBE	O	IO Expander Strobe for D-Port Playback Control
67	HOP_DA	O	Frequency Hop Control DA
68	MUTE_C_S	O	Center and Surround L & R Mute
69	MUTE_F_SW	O	Front L & R Mute and SubWoofer Mute
70	AMBP	O	AM Beat Proof for SMPS
71	MOD_DA	O	Digital Amp Standby Control
72	PCONT	O	Power Control of XM Module
73	CEC_OUT	I	Output Port for HDMI/CEC
74	ACS_MUTE	O	ACS Mute Control
75	CEC_IN	I	HDMI/CEC Input
76	JOG_A/ VOL_UP	I	Signal A from Volume JOG / Volume Up Button
77	JOG_B/ VOL_DOWN	I	Signal B from Volume JOG / Volume Down Button
78	HP_MUTE	O	Head Phone Mute signal
79	BATT_PCONT	O	Power Control for Battery Charging
80	XM_I2SRATE	I	XM I2SRATE
81	DPORT_DET2	I	D-Port Detection 2
82	IPOD DETECT	I	iPod Detection
83	EXP_CLK	O	IO Expander Clock for D-Port Playback Control
84	EXP_DATA	O	IO Expander Data for D-Port Playback Control
85	FLD_CLK	O	Clock Signal for the FL Driver
86	FLD_STB	O	FL Strobe
87	FLD_OUT	O	FL Data Out
88	DPORT_DET1	I	D-Port Detection 1
89	MD3	I	Model Code 3
90	MD2	I	Model Code 2
91	KEY2	I	Key 2 line input
92	ACS	I	Auto Calibration
93	DISC_SENSE	I	Disc Sense
94	DES2	I	Model Selector
95	DES1	I	REGION Setting for Tuner
96	AVSS	-	Analog Power Supply Input
97	KEY1	I	Key 1 Line input
98	VREF	-	Reference Voltage Input
99	AVCC	-	Analog Power Supply Input
100	DISC1_LED	O	Changer Disc 1 LED Indicator

25 Exploded Views

25.1. Cabinet Parts Location

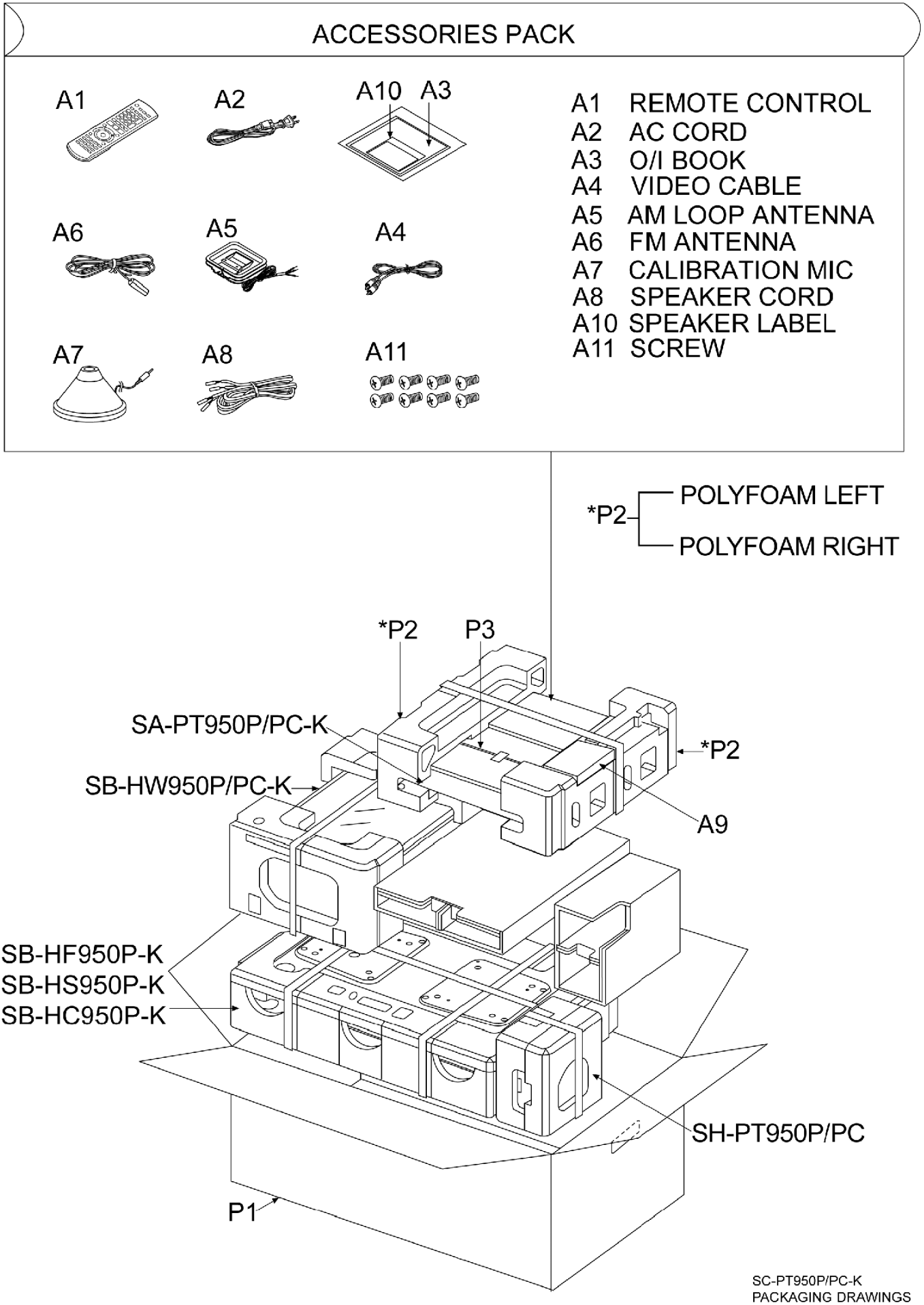




		PART NUMBER
A	GREASE	RZGGG6AG
B	GREASE	RZGGG902
C	HANARL	RZGGFL68A

SA-PT950P/PC-K CD LOADING MECHANISM/
TRAVERSE UNIT DRAWINGS

25.2. Packaging



SC-PT950P/PC-K
PACKAGING DRAWINGS

26 Replacement Parts List

Notes:

*Important safety notice:

Components identified by ⚠ mark have special characteristics important for safety purpose.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.

*Warning: This product uses a laser diode. Refer to caution statements.

*Capacity values are in microfarads (μF) unless specified otherwise, P=Pico-farads (pF), F=Farads (F).

*Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000K (OHM).

*The parenthesized indications in the Remarks columns specify the model names and areas. (Refer to the cover page)

*The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

*Parts mentioned [M] are supplied from PAVCSG.

*Parts mentioned [SPG] are supplied from PAVC.

26.1. Component Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	J3CCBB000007	TUNER PACK	[M]
2	REXX0558	11P FLAT WIRE	[M]
3	REXX0554	PRIMARY WIRE (BLACK)	[M]
4	REXX0555	PRIMARY WIRE (RED)	[M]
5	L6FAJCCH0007	DC FAN MOTOR	[M]
6	REEX0662	50P FFC WIRE	[M]
7	REEX0663	7P FFC WIRE	[M]
8	REEX0664	17P FFC WIRE	[M]
9	REEX0665	14P FFC WIRE	[M]
10	REEX0666	28P FFC WIRE	[M]
11	RSCX0153-1	XM SHIELD PLATE	[M]
12	REEX0667	17P FFC WIRE	[M]
13	REEX0668	28P FFC WIRE (FL)	[M]
14	REEX0669	10P FFC (MAIN)	[M]
15	REEX0749	12P FFC WIRE	[M]
16	REEX0785	11P FFC WIRE	[M]
17	REXX0556	8P FLAT WIRE	[M]
20	RGPX0280A-K	FRONT PANEL	[M]
21	RGQX0027-1	TOP FFC COVER	[M]
22	RGRX0061A-C1	REAR PANEL	[M] P
22	RGRX0061A-D1	REAR PANEL	[M] PC
23	RGUX0695-K	OPEN CLOSE BUTTON	[M]
24	RGUX0697-K	EXCHANGE BUTTON	[M]
25	RGUX0700-S	VOLUME BUTTON	[M]
26	RGUX0699-Q	5 DISC BUTTON	[M]
27	RHD26046	SCREW	[M]
28	RHD30007-K2J	SCREW	[M]
29	RHD30070	EARTH TERMINAL	[M]
30	RHD30107-1	SCREW	[M]
31	RHD30111-3	SCREW	[M]
32	RHD30119-S	SCREW	[M]
33	RKA0059-K	LEG RUBBER	[M]
34	RKMX0118B-K1	TOP CABINET	[M]
35	RKWX0269-Q	FL WINDOW	[M]
36	RMAX0106	MECHA BRACKET	[M]
37	RMAX0118	PCB BRACKET	[M]
38	RMC0465	TR SPRING	[M]
39	RMKX0126	BOTTOM CHASSIS	[M]
40	RMKX0127-K	TRANSMITTER CHASSIS	[M]
42	RMNX0166	HOLDER A	[M]
43	RMNX0171	HOLDER B	[M]
44	RMNX0210	TRAY GUIDE L	[M]
45	RMNX0211	TRAY GUIDE R	[M]
46	RMNX0231	D-PORT COVER	[M]
48	RMQX0233-K	FAN COVER	[M]
49	RMX0274	TRAY SUPPORT R	[M]
50	RMYX0191	HEATSINK EXTRUSSION	[M]
51	RMX0275	TRAY SUPPORT L	[M]
52	RMY0285	SMALL HEAT SINK	[M]
53	RMZ0339	COVER	[M]
54	RWJ1108090XX	8P FLAT WIRE	[M]
56	RXXX0085	HEATSINK UNIT A	[M]
57	XTB3+8JFJ	SCREW	[M]
58	RXXX0086	HEATSINK UNIT B	[M]
59	RXXX0087	HEATSINK UNIT C	[M]
60	RXXX0098	HEATSINK UNIT D	[M]
61	RYQX0284-K	TRAY LID ASS'Y	[M]
62	XTB3+10JFJ	SCREW	[M]
63	XTB3+16JFJ	SCREW	[M]
64	XTB3+6JFJ	SCREW	[M]
65	XTW3+8TFJ	SCREW	[M]
66	RMNX0238	PC SHEET	[M]
67	RMNX0149	FL HOLDER	[M]
69	J0KD00000121	FERRITE CORE	[M]
70	RGKX0385-Q	LIGHTING RING	[M]
		TRAVERSE DECK	
301	RDG0562	PULLEY GEAR	[M]
302	RDG0563-1	REALAY GEAR A	[M]
303	RDG0564	RELAY GEAR B	[M]
304	RDG0565	DRIVE GEAR A	[M]
305	RDG0566	DRIVE GEAR B	[M]
306	RDG0567	PULSE GEAR	[M]
307	RDG0568-1	OPEN LOCK GEAR	[M]
308	RDG0569-1	CLOSE LOCK GEAR	[M]
309	RDG0570	CAM GEAR	[M]
310	RDV0072	LOADING BELT	[M]
311	RDV0073	TRAY BELT	[M]
312	REM0112	LOADING MOTOR ASS'Y	[M]
313	RGQ0359-K1	ROTARY TRAY	[M]
314	RGQ0446-K	TRAY BASE	[M]
315	RHM0003-J	MAGNET	[M]
316	RMB0842	TRAY SPRING	[M]
317	RMC0387	SUPPORT SPRING	[M]
318	RME0384	CLOSE LOCK GEAR SPRING	[M]
319	RMF0182	TRAY FELT	[M]
320	RMF0324-1	BLOCK SHEET	[M]
321	RMG0615-K	CUSHION SHEET	[M]
322	RMG0620-K	CUSHION RUBBER	[M]
323	RMK0555-2	MECHA BASE	[M]
324	RML0646	CHANGE LEVER	[M]
325	RMM0254-2	SLIDE PLATE R	[M]
326	RMM0255	SLIDE PLATE L	[M]
327	RMM0256-2	BLOCK BASE	[M]
328	RMR1446-X	CLAMPER	[M]
329	RMR1447-X	MAGNET HOLDER	[M]
330	RMR1507-X	SUPPORT PIECE	[M]
331	RMS0123-1	FIXED PIN B	[M]
332	RMS0802-2J	DRIVE SHAFT	[M]
333	XTB3+10JFJ	SCREW	[M]
334	XTN26+14JFJK	SCREW	[M]
335	XTN26+8GFJ	SCREW	[M]
336	XTV2+6GFJ	SCREW	[M]
337	XTWS3+10SFJ	SCREW	[M]
338	XWG6FFJ	WASHER	[M]
341	REEX0670	11P FFC WIRE	[M]
342	RAE2022Z-S	DT6J TRAVERSE UNIT	[M]
343	RMG0598A-K	FLOATING RUBBER	[M]
344	RMR1753-X	MIDDLE CHASSIS	[M]
345	RMS0789	FIXED PIN	[M]
		PRINTED CIRCUIT BOARDS	
	REPX0563A	DVD MODULE P.C.B.	[M] (RTL)
	REPX0590A	XM MODULE P.C.B.	[M] (RTL)
	REPX0574A	MAIN/PANEL/KEY/WIRELESS ADAPTER/TRAY P.C.B.	[M] (RTL) P
	REPX0574B	MAIN/PANEL/KEY/WIRELESS ADAPTER/TRAY P.C.B.	[M] (RTL) PC
	REPX0601A	D-PORT P.C.B.	[M] (RTL)
	REPX0560A	D-AMP P.C.B.	[M] (RTL)
	REPX0568A	SMPS/AC-INLET P.C.B.	[M] (RTL)
	REP3465B	LOADING MOTOR P.C.B.	[M] (RTL)
	REP3466B	TRAY MOTOR P.C.B.	[M] (RTL)
	REP3466B	SENSOR P.C.B.	[M] (RTL)
		INTEGRATED CIRCUITS	
IC1	C1AB00002670	IC XM SAT RADIO DRIVER	[M]
IC2	C0DBZYE00002	IC POWER SUPPLY	[M]
IC3	C0FBBY000027	IC 2CH D-A CONVERTER	[M]
IC2001	C2CBYY000442	IC SYSTEM CONTROL	[M]
IC2002	C0GAG0000007	IC LOADING MOTOR DRIVE	[M]
IC2101	C1AB00002735	IC AUDIO SIGNAL PROCESSOR	[M]
IC2102	C0AABB000125	IC OP-AMP (HEADPHONES AMP)	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
IC2104	C0ABBB000230	IC DUAL OP-AMP (WIRELESS CH1 AMP)	[M]
IC2105	C0JBAR000002	IC DUAL 4CH MULTIPLEXER (WIRELESS CH1 SIGNAL SELECTOR)	[M]
IC2751	C0ABBB000350	IC OP-AMP	[M]
IC2801	C9ZB00000461	IC VIDEO BUFFER	[M]
IC2900	C0DAAYY00042	IC SWITCHING REGULATOR	[M]
IC2901	C0DAGHG00002	IC +5V REGULATOR	[M]
IC2902	C0CBCBC00208	IC +3.3V REGULATOR	[M]
IC2903	C0DAAMH00012	IC SWITCHING REGULATOR	[M]
IC3901	MN864702	IC HDMI TRANSMITTER	[M]
IC3952	C0CBCDC00063	IC TERMINAL VOLTAGE REGULATOR	[M]
IC5000	C1BA00000487	IC AUDIO DIGITAL POWER AMP	[M]
IC5200	C1BA00000487	IC AUDIO DIGITAL POWER AMP	[M]
IC5300	C1BA00000487	IC AUDIO DIGITAL POWER AMP	[M]
IC5400	C1BA00000487	IC AUDIO DIGITAL POWER AMP	[M]
IC5500	C0JBAB000902	IC INVERTER GATE (CLOCK GENERATOR)	[M]
IC5501	C0JBAF000716	IC D-TYPE FLIP-FLOP	[M]
IC5701	C0DAAMH00004	IC SWITCHING REGULATOR	[M]
IC5799	MIP4110MSSCF	IC SWITCHING REGULATOR	[M]
IC5801	C0DABFC00002	IC SHUNT REGULATOR	[M]
IC6106	C0ABBB000230	IC OP-AMP	[M]
IC6901	C0HBB0000057	IC DISPLAY DRIVER	[M]
IC7750	C0GAG0000007	IC TRAY MOTOR DRIVE	[M]
IC8001	MN2DS0018VP	IC DV5 LSI	[M]
IC8002	C0CBCDG00003	IC +5V REGULATOR	[M]
IC8003	C0ABBB000230	IC DUAL OP-AMP (IPOD AMP)	[M]
IC8051	C3ABPG000145	IC 64M SDRAM	[M]
IC8111	C0DBZYY00018	IC +3.3V DC-DC CONVERTER	[M]
IC8151	C0DBEHG00006	IC +1.2V REGULATOR	[M]
IC8251	C0GBG0000048	IC MOTOR DRIVE	[M]
IC8421	C0FBBK000050	IC AUDIO DAC	[M]
IC8601	C0EBA0000029	IC RESET	[M]
IC8606	C0EBE0000456	IC RESET	[M]
IC8651	RFKWMHB0G320	IC 32M FLASH MEMORY	[SPG]
IC8691	C0JBAA000502	IC AND GATE	[M]
IC8695	C0JBAA000502	IC AND GATE	[M]
IC8701	C0JBAB000907	IC INVERTER GATE	[M]
IC8901	C0JBAA000501	IC AND GATE	[M]
IC9001	C0JBAZ001251	IC LATCH	[M]
IC9002	C0JBAZ001251	IC LATCH	[M]
		TRANSISTORS	
Q2001	B1GBCFJJ0051	TRANSISTOR	[M]
Q2003	B1GBCFLL0037	TRANSISTOR	[M]
Q2006	B1GBCFJN0033	TRANSISTOR	[M]
Q2010	B1GBCFJJ0051	TRANSISTOR	[M]
Q2011	B1GBCFJJ0051	TRANSISTOR	[M]
Q2012	B1GBCFJJ0051	TRANSISTOR	[M]
Q2013	B1GBCFJJ0051	TRANSISTOR	[M]
Q2095	B1GDCFJJ0047	TRANSISTOR	[M]
Q2096	2SD0601AHL	TRANSISTOR	[M]
Q2097	2SD0601AHL	TRANSISTOR	[M]
Q2101	B1GFGCAA0001	TRANSISTOR	[M]
Q2201	B1GDCFGA0018	TRANSISTOR	[M]
Q2801	B1GBCFJN0033	TRANSISTOR	[M]
Q2900	B1BABK000001	TRANSISTOR	[M]
Q2901	B1BCCG000002	TRANSISTOR	[M]
Q2902	B1ADCF000001	TRANSISTOR	[M]
Q2903	B1BACG000023	TRANSISTOR	[M]
Q2904	B1BACG000023	TRANSISTOR	[M]
Q2909	B1ABCF000176	TRANSISTOR	[M]
Q2915	B1GBCFJJ0051	TRANSISTOR	[M]
Q2919	B1ABCF000176	TRANSISTOR	[M]
Q2921	B1ADCF000001	TRANSISTOR	[M]
Q2922	B1GBCFJJ0051	TRANSISTOR	[M]
Q2923	B1GBCFJJ0051	TRANSISTOR	[M]
Q2924	B1GBCFJJ0051	TRANSISTOR	[M]
Q3901	2SD1819A0L	TRANSISTOR	[M]
Q3902	B1CFHA000002	TRANSISTOR	[M]
Q3903	B1CFHA000002	TRANSISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
Q3941	2SD1819A0L	TRANSISTOR	[M]
Q3942	2SD1819A0L	TRANSISTOR	[M]
Q3943	2SD1819A0L	TRANSISTOR	[M]
Q5101	B1ABCF000176	TRANSISTOR	[M]
Q5102	B1ABCF000176	TRANSISTOR	[M]
Q5601	B1ABCF000176	TRANSISTOR	[M]
Q5602	B1ABCF000176	TRANSISTOR	[M]
Q5603	B1ADCE000012	TRANSISTOR	[M]
Q5604	B1ABCF000176	TRANSISTOR	[M]
Q5640	B1BACD000018	TRANSISTOR	[M]
Q5641	B1ABCF000011	TRANSISTOR	[M]
Q5642	B1ABCF000011	TRANSISTOR	[M]
Q5644	B1ABCF000011	TRANSISTOR	[M]
Q5720	2SC3940ARA	TRANSISTOR	[M]
Q5721	B1ADCF000001	TRANSISTOR	[M]
Q5722	B1ABCF000176	TRANSISTOR	[M]
Q5802	B1ABCF000176	TRANSISTOR	[M]
Q5803	2SC3940ARA	TRANSISTOR	[M]
Q5860	B1ADCF000001	TRANSISTOR	[M]
Q5861	B1ABCF000176	TRANSISTOR	[M]
Q5862	B1ABCF000176	TRANSISTOR	[M]
Q5898	B1ABCF000176	TRANSISTOR	[M]
Q5899	B1ABCF000176	TRANSISTOR	[M]
Q6102	B1ABEB000002	TRANSISTOR	[M]
Q6103	B1ADCE000012	TRANSISTOR	[M]
Q6110	B1GBCFJJ0051	TRANSISTOR	[M]
Q6111	B1GBCFJJ0051	TRANSISTOR	[M]
Q6202	B1GDCFGA0018	TRANSISTOR	[M]
Q6901	B1GBCFJN0033	TRANSISTOR	[M]
Q6903	B1GDCFJJ0047	TRANSISTOR	[M]
Q7101	B1GFGCAA0001	TRANSISTOR	[M]
Q7750	B1GBCFJJ0051	TRANSISTOR	[M]
Q8321	2SB1218ARL	TRANSISTOR	[M]
Q8325	2SB1218ARL	TRANSISTOR	[M]
Q8331	2SB1218ARL	TRANSISTOR	[M]
Q8335	2SB1218ARL	TRANSISTOR	[M]
Q8341	2SB1218ARL	TRANSISTOR	[M]
Q8551	2SD1819A0L	TRANSISTOR	[M]
Q8552	B1ADGB000008	TRANSISTOR	[M]
Q8561	2SD1819A0L	TRANSISTOR	[M]
Q8562	B1ADGB000008	TRANSISTOR	[M]
Q9001	B3NAA0000098	CAM SENSOR	[M]
Q9101	B3NAA0000082	POSITION SENSOR	[M]
Q9102	B3NAA0000102	PULSE SENSOR	[M]
Q9103	B3NAB0000027	DISC SENSOR	[M]
QR5801	B1GBCFJN0033	TRANSISTOR	[M]
QR5810	B1GBCFLL0037	TRANSISTOR	[M]
QR8111	XP0621400L	CHIP TRANSISTOR	[M]
QR8420	UNR521100L	CHIP TRANSISTOR	[M]
QR8571	UNR511V00L	TRANSISTOR	[M]
PC5701	B3PBA0000402	PHOTO COUPLER	[M] ⚠
PC5702	B3PBA0000402	PHOTO COUPLER	[M] ⚠
PC5720	B3PBA0000402	PHOTO COUPLER	[M] ⚠
PC5799	B3PBA0000402	PHOTO COUPLER	[M] ⚠
		DIODES	
D1	MA2J72800L	DIODE	[M]
D2005	B0ACCK000005	DIODE	[M]
D2007	B0ACCK000005	DIODE	[M]
D2008	B0ACCK000005	DIODE	[M]
D2009	B0JCAE000001	DIODE	[M]
D2010	B0JCAE000001	DIODE	[M]
D2011	B0JCAE000001	DIODE	[M]
D2601	B0ACCK000005	DIODE	[M]
D2602	B0ACCK000005	DIODE	[M]
D2751	B0BC5R000009	DIODE	[M]
D2752	B0ACCK000005	DIODE	[M]
D2753	B0ACCK000005	DIODE	[M]
D2901	B0BC035A0007	DIODE	[M]
D2903	B0EAMM000057	DIODE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
D2904	B0JCPD000025	DIODE	[M]
D2906	B0JAME000029	DIODE	[M]
D2908	B0EAMM000057	DIODE	[M]
D2909	MAZ82400HL	DIODE	[M]
D2910	B0ECKM000016	DIODE	[M]
D2911	B0ECKM000016	DIODE	[M]
D2912	B0BC3R400001	DIODE	[M]
D2913	B0JCPD000025	DIODE	[M]
D2914	B0ACCK000005	DIODE	[M]
D2915	B0ACCK000005	DIODE	[M]
D2943	B0ADCJ000020	DIODE	[M]
D2944	B0ACCK000005	DIODE	[M]
D2945	B0ACCK000005	DIODE	[M]
D2946	B0BC7R500001	DIODE	[M]
D2947	B0BC010A0007	DIODE	[M]
D2948	B0BC7R500001	DIODE	[M]
D2949	B0BC5R000009	DIODE	[M]
D3901	MA2J72800L	DIODE	[M]
D5501	B0ACCE000003	DIODE	[M]
D5502	B0ACCE000003	DIODE	[M]
D5503	B0BC5R000009	DIODE	[M]
D5640	B0BC01200019	DIODE	[M]
D5643	B0ACCK000005	DIODE	[M]
D5644	B0ACCK000005	DIODE	[M]
D5645	B0ACCK000005	DIODE	[M]
D5701	B0FBAR000041	DIODE	[M] ⚠
D5702	B0ZAZ0000052	DIODE	[M]
D5721	B0BC01700015	DIODE	[M]
D5722	B0BC01600013	DIODE	[M]
D5723	B0ACCK000005	DIODE	[M]
D5724	B0EAMM000057	DIODE	[M]
D5725	B0JAME000029	DIODE	[M]
D5726	B0EAKM000117	DIODE	[M]
D5728	B0ACCK000005	DIODE	[M]
D5729	B0EAMM000057	DIODE	[M]
D5730	B0ACCK000005	DIODE	[M]
D5731	B0EAMM000057	DIODE	[M]
D5732	B0BC02900004	DIODE	[M]
D5793	B0EAKB000004	DIODE	[M]
D5797	MA2J72800L	DIODE	[M]
D5798	B0EAMM000057	DIODE	[M]
D5801	B0HBSM000043	DIODE	[M]
D5802	B0HBSM000043	DIODE	[M]
D5803	B0HFRJ000012	DIODE	[M]
D5804	B0EAMM000057	DIODE	[M]
D5805	B0EAMM000057	DIODE	[M]
D5806	B0BC7R500001	DIODE	[M]
D5807	B0ACCK000005	DIODE	[M]
D5896	B0EAMM000057	DIODE	[M]
D5897	B0BC3R700004	DIODE	[M]
D6100	B0ACCK000005	DIODE	[M]
D6101	B0ACCK000005	DIODE	[M]
D6102	B0BC5R000009	DIODE	[M]
D6901	B3ACA0000273	DIODE	[M]
D6902	B3ACA0000273	DIODE	[M]
D6903	B3ACA0000273	DIODE	[M]
D6904	B3ACA0000273	DIODE	[M]
D6905	B3ACA0000273	DIODE	[M]
D6907	B3AEA0000058	DIODE	[M]
D6910	B0BC2R4A0006	DIODE	[M]
D7750	B0ECKM000016	DIODE	[M]
D7751	B0ECKM000016	DIODE	[M]
D8211	MA2J11100L	DIODE	[M]
D8571	MA2J72800L	DIODE	[M]
DZ5701	ERZV10V511CS	ZENER	[M] ⚠
		SWITCHES	
S6801	EVQ21405R	SW PLAY	[M]
S6802	EVQ21405R	SW BACKWARD	[M]
S6803	EVQ21405R	SW FORWARD	[M]
S6804	EVQ21405R	SW STOP	[M]
S6805	EVQ21405R	SW DISC EXCHANGE	[M]
S6806	EVQ21405R	SW SKIP	[M]
S6808	EVQ21405R	SW OPEN/CLOSE	[M]
S6809	EVQ21405R	SW (VOLUME) UP	[M]
S6810	EVQ21405R	SW (VOLUME) DOWN	[M]
S6900	EVQ21405R	SW POWER	[M]
S6902	EVQ21405R	SW DISC 1	[M]
S6903	EVQ21405R	SW DISC 2	[M]
S6904	EVQ21405R	SW DISC 3	[M]
S6905	EVQ21405R	SW DISC 4	[M]
S6906	EVQ21405R	SW DISC 5	[M]
S6907	EVQ21405R	SW SELECTOR	[M]
S9001	K0L1BA000086	LOAD SWITCH	[M]
		CONNECTORS	
CN2001	K1MY50AA0029	50P CONNECTOR	[M]
CN2002	K1KA10AA0031	10P CONNECTOR	[M]
CN2003	K1MN14BA0004	14P CONNECTOR	[M]
CN2004	K1YZ11000002	11P CABLE HOLDER	[M]
CN2005	K1MN11AA0003	11P CONNECTOR	[M]
CN2006	K1MN08AA0003	8P CONNECTOR	[M]
CN2007	K1MN28BA0005	28P CONNECTOR	[M]
CN2008	K1MN12AA0003	12P CONNECTOR	[M]
CN2009	K1MN17BA0005	17P CONNECTOR	[M]
CN2010	K1MN07B00009	7P CONNECTOR	[M]
CN2011	K1MN10BA0004	10P CONNECTOR	[M]
CN2012	K1MN17AA0004	17P CONNECTOR	[M]
CN5050	K1MN17BA0005	17P CONNECTOR	[M]
CN5501	K1KA03AA0301	3P CONNECTOR	[M]
CN5801	K1KA08AA0180	8P CONNECTOR	[M]
CN5802	K1KA11BA0062	11P CONNNECTOR	[M]
CN6300	K1MN14BA0004	14P CONNECTOR	[M]
CN6301	K1MY22A00003	22P CONNECTOR	[M]
CN6902	K1MN28AA0004	28P CONNECTOR	[M]
CN7001	K1MN28BA0005	28P CONNECTOR	[M]
CN7002	K1MN28AA0004	28P CONNECTOR	[M]
CN7003	K1MN11AA0003	11P CONNECTOR	[M]
CN7004	K1MN10BA0004	10P CONNECTOR	[M]
CN8001	K1MN12BA0148	12P CONNECTOR	[M]
CN8002	K1FY124DA001	24P CONNECTOR	[M]
CN9003	K1MN11B00017	11P CONNECTOR	[M]
CN9102	K1MN11B00017	11P CONNECTOR	[M]
FC9101	RWJ4906082SS	6P FLAT CABLE	[M]
FP1	K1MN17BA0005	17P CONNECTOR	[M]
FP3902	K1MN07BA0148	7P CONNECTOR	[M]
FP8101	K1MN50BA0173	50P CONNECTOR	[M]
FP8251	K1MN06AA0076	6P CONNECTOR	[M]
FP8531	K1MN26AA0041	26P CONNECTOR	[M]
		THERMISTOR	
TH5701	D4CAA5R10001	THERMISTOR	[M] ⚠
TH5860	D4CC11040013	THERMISTOR	[M] ⚠
		COILS & TRANSFORMERS	
L2001	J0JBC0000015	CHIP INDUCTOR	[M]
L2002	J0JBC0000015	CHIP INDUCTOR	[M]
L2003	J0JBC0000015	CHIP INDUCTOR	[M]
L2004	J0JBC0000015	CHIP INDUCTOR	[M]
L2005	J0JBC0000015	CHIP INDUCTOR	[M]
L2006	J0JBC0000015	CHIP INDUCTOR	[M]
L2009	G0C220JA0055	COIL	[M]
L2101	J0JBC0000015	CHIP INDUCTOR	[M] ⚠
L2201	J0JBC0000015	CHIP INDUCTOR	[M] ⚠
L2801	G0C220JA0055	COIL	[M]
L2802	J0JBC0000015	CHIP INDUCTOR	[M] ⚠
L2803	J0JBC0000015	CHIP INDUCTOR	[M] ⚠
L2804	J0JBC0000015	CHIP INDUCTOR	[M] ⚠
L2805	J0JBC0000015	CHIP INDUCTOR	[M] ⚠

Ref. No.	Part No.	Part Name & Description	Remarks
L2902	G0A101G00022	COIL	[M]
L2903	G0A101G00022	COIL	[M]
L2904	G0A100HA0023	INDUCTOR	[M]
L2905	G0A100HA0023	INDUCTOR	[M]
L2906	G0A200D00002	COIL	[M]
L2907	G0A101EA0017	COIL	[M]
L2908	G0A200D00002	COIL	[M]
L2909	G0A200D00002	COIL	[M]
L2910	G0A220GA0026	INDUCTOR	[M]
L2911	G0A200D00002	COIL	[M]
L2912	G0A220GA0026	INDUCTOR	[M]
L2913	G0A220GA0026	INDUCTOR	[M]
L2914	G0C220JA0055	COIL	[M]
L3903	J0MAB0000170	FILTER	[M]
L3904	J0MAB0000170	FILTER	[M]
L3905	J0MAB0000170	FILTER	[M]
L3906	J0MAB0000170	FILTER	[M]
L5000	G0A150L00003	LINE CHOKE COIL	[M]
L5001	G0B9R5K00003	LINE CHOKE COIL	[M] ⚠
L5002	G0B9R5K00003	LINE CHOKE COIL	[M] ⚠
L5200	G0A150L00003	LINE CHOKE COIL	[M]
L5201	G0B9R5K00003	LINE CHOKE COIL	[M] ⚠
L5300	G0A150L00003	LINE CHOKE COIL	[M]
L5301	G0B9R5K00003	LINE CHOKE COIL	[M] ⚠
L5400	G0A150L00003	LINE CHOKE COIL	[M]
L5500	J0JKB0000020	EMI BEAD CORE	[M] ⚠
L5501	J0JKB0000020	EMI BEAD CORE	[M] ⚠
L5702	ELF22V035B	COIL	[M] ⚠
L5721	J0JKB0000020	EMI BEAD CORE	[M] ⚠
L6101	J0JBC0000019	CHIP INDUCTOR	[M]
L6102	J0JBC0000019	CHIP INDUCTOR	[M]
L6201	J0JBC0000019	CHIP INDUCTOR	[M]
L6202	J0JBC0000019	CHIP INDUCTOR	[M]
L6801	J0JBC0000019	CHIP INDUCTOR	[M]
L6903	J0JBC0000019	CHIP INDUCTOR	[M]
L6904	J0JBC0000019	CHIP INDUCTOR	[M]
L6905	J0JBC0000019	CHIP INDUCTOR	[M]
L7750	J0JBC0000015	CHIP INDUCTOR	[M]
L7752	J0JBC0000015	CHIP INDUCTOR	[M]
L7753	J0JBC0000015	CHIP INDUCTOR	[M]
L8201	G1C100K00019	CHIP COIL	[M]
L8301	G1C100K00019	CHIP COIL	[M]
L8302	G1C100K00019	CHIP COIL	[M]
L8303	G1C100K00019	CHIP COIL	[M]
L8330	G1C100K00019	CHIP COIL	[M]
L8501	G1C100K00019	CHIP COIL	[M]
L8550	G1C100KA0055	CHIP INDUCTOR	[M]
		CHIP INDUCTORS	
LB1	J0JBC0000019	CHIP INDUCTOR	[M]
LB2	J0JHC0000107	INDUCTOR COIL	[M]
LB3	J0JBC0000014	CHIP INDUCTOR	[M]
LB4	J0JGC0000050	EMI FILTER	[M]
LB6	J0JHC0000107	INDUCTOR COIL	[M]
LB7	J0JHC0000107	INDUCTOR COIL	[M]
LB3901	J0JHC0000045	CHIP INDUCTOR	[M]
LB3902	J0JHC0000045	CHIP INDUCTOR	[M]
LB3903	J0JCC0000119	CHIP INDUCTOR	[M]
LB3904	J0JCC0000119	CHIP INDUCTOR	[M]
LB3905	J0JCC0000119	CHIP INDUCTOR	[M]
LB3906	J0JCC0000119	CHIP INDUCTOR	[M]
LB3907	J0JHC0000045	CHIP INDUCTOR	[M]
LB3908	J0JHC0000045	CHIP INDUCTOR	[M]
LB8001	J0JHC0000045	CHIP INDUCTOR	[M]
LB8011	J0JHC0000045	CHIP INDUCTOR	[M]
LB8257	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB8258	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB8259	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB8260	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB8301	J0JBC0000042	CHIP BEAD	[M]
LB8302	J0JBC0000042	CHIP BEAD	[M]
LB8303	J0JBC0000042	CHIP BEAD	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
LB8304	J0JBC0000042	CHIP BEAD	[M]
LB8305	J0JBC0000042	CHIP BEAD	[M]
LB8401	J0JBC0000042	CHIP BEAD	[M]
LB8421	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8422	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8423	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8424	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8425	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8426	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8427	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8428	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8429	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8431	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8491	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8530	J0JHC0000045	CHIP INDUCTOR	[M]
LB8531	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8551	J0JBC0000042	CHIP BEAD	[M]
LB8561	J0JBC0000042	CHIP BEAD	[M]
LB8571	J0JBC0000042	CHIP BEAD	[M]
LB8690	J0JBC0000044	HIGH LOSS INDUCTOR	[M]
LB8691	ERJ2GEJ101X	CHIP RESISTOR	[M]
LB8692	ERJ2GEJ101X	CHIP RESISTOR	[M]
LB8693	ERJ2GEJ101X	CHIP RESISTOR	[M]
LB8701	J0JBC0000044	HIGH LOSS INDUCTOR	[M]
LB8702	J0JBC0000044	HIGH LOSS INDUCTOR	[M]
		TRANSFORMERS	
T2900	G4D1A0000117	TRANSFORMER	[M] ⚠
T5701	ETS42BM15GAD	TRANSFORMER	[M] ⚠
T5751	ETS19AB236AG	TRANSFORMER	[M] ⚠
		COMPONENT COMBINATION	
Z6900	B3RAD0000143	CRYSTAL	[M]
		VARIABLE RESISTORS	
VA1	EZJZ0V80008B	VARISTOR	[M]
VA2	EZJZ0V80008B	VARISTOR	[M]
VA3	EZJZ0V80008B	VARISTOR	[M]
VA3901	EZAEG2A50AX	ESD SUPRESSOR	[M]
VA3902	EZAEG2A50AX	ESD SUPRESSOR	[M]
VA3903	EZAEG2A50AX	ESD SUPRESSOR	[M]
VA3904	EZAEG2A50AX	ESD SUPRESSOR	[M]
VA3905	EZAEG2A50AX	ESD SUPRESSOR	[M]
VA3906	EZAEG2A50AX	ESD SUPRESSOR	[M]
VA3907	EZAEG2A50AX	ESD SUPRESSOR	[M]
VA3908	EZAEG2A50AX	ESD SUPRESSOR	[M]
VA3909	EZJZ0V800AA	VARISTOR	[M]
VA3910	EZJZ0V800AA	VARISTOR	[M]
VA3911	EZJZ0V800AA	VARISTOR	[M]
VA3912	EZJZ0V800AA	VARISTOR	[M]
VA3913	EZJZ0V800AA	VARISTOR	[M]
		TERMINALS	
ZJ5400	K4CZ01000027	TERMINAL	[M]
ZJ5410	K4CZ01000027	TERMINAL	[M]
ZJ5701	K4CZ01000027	TERMINAL	[M]
ZJ5801	K4CZ01000027	TERMINAL	[M]
ZJ5802	K4CZ01000027	TERMINAL	[M]
ZJ5803	K4CZ01000027	TERMINAL	[M]
		OSCILLATORS	
X1	H0A451500001	CRYSTAL	[M]
X2001	H2B100500004	CERAMIC RESONATOR	[M]
X5500	H2A6023A0011	CERAMIC RESONATOR	[M]
X5501	H2A7003A0011	CERAMIC RESONATOR	[M]
X8621	H0J270500085	CRYSTAL	[M]
		DISPLAY TUBE	

Ref. No.	Part No.	Part Name & Description	Remarks
FL6901	A2BD00000170	FL DISPLAY	[M]
FL8101	F1H0J1050018	INDUCTOR	[M]
FL8102	F1H0J1050018	INDUCTOR	[M]
FL8103	F1H0J1050018	INDUCTOR	[M]
FL8104	F1J1E1040022	INDUCTOR	[M]
FL8421	F1H0J1050018	INDUCTOR	[M]
		FUSE	
F1	K5D802APA008	FUSE	[M] ⚠
		FUSE HOLDERS	
ZA5701	EYF52BCY	FUSE HOLDER	[M]
ZA5702	EYF52BCY	FUSE HOLDER	[M]
		FUSE PROTECTOR	
FP2902	K5H5012A0010	FUSE PROTECTOR	[M] ⚠
		HOLDERS	
H5500	K1YF08000003	8P CABLE HOLDER	[M]
H6801	K1YZ08000002	8P CABLE HOLDER	[M]
H6901	K1YZ08000002	8P CABLE HOLDER	[M]
		JACKS	
JK1	K1FA104B0047	JACK XM CONNECTOR	[M]
JK2001	K2HA306B0070	JACK	[M]
JK5001	K4AC08B00012	JACK SPEAKER	[M]
JK6801	K2HC103A0024	JACK HEADPHONE	[M]
JK6802	K2HC1YYA0005	JACK MUSIC PORT	[M]
P3901	K1FY119E0002	HDMI CONNECTOR	[M]
P5701	K2AB2B000010	JACK AC	[M] ⚠
		EARTH TERMINALS	
E2900	K4CZ01000027	TERMINAL	[M]
E2901	K4CZ01000027	TERMINAL	[M]
E6300	K4CZ01000027	TERMINAL	[M]
		PACKING MATERIALS	
P1	RPGX1694	PACKING CASE	[M] P
P1	RPGX1695	PACKING CASE	[M] PC
P2	RPNX0456	POLYFOAM (MAIN SET)	[M]
P3	RPFX0058-1J	MIRAMAT	[M]
		ACCESSORIES	
A1	EUR7662YX0	REMOTE CONTROL	[M]
A1-1	UR76EC5903A	R/C BATTERY COVER	[M]
A2	K2CB2CB00018	AC CORD	[M] ⚠
A3	RQTX0064-P	O/I BOOK (EN)	[M] P
A3	RQTX0065-C	O/I BOOK (CF)	[M] PC
A4	K2KA2BA00001	VIDEO CABLE	[M]
A5	N1DAAAA00002	AM LOOP ANTENNA	[M]
A6	RSA0007-L	FM ANTENNA	[M]
A7	L0CBAB000125	CALIBRATION MIC	[M]
A8	REEX0449B-2L	SPEAKER CORD	[M]
A9	RFE0205	I-POD CRADLE	[M]
A10	RQCXA0013-1	SPEAKER LABEL	[M]
A11	XSN5+12FJ	SCREW	[M]
		RESISTORS	
R1	ERJ3GEYJ104V	100K 1/16W	[M]
R2	ERJ3GEYJ104V	100K 1/16W	[M]
R3	ERJ3GEYJ104V	100K 1/16W	[M]
R4	ERJ3GEYJ104V	100K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R6	ERJ3GEYJ472V	4.7K 1/16W	[M]
R7	ERJ3GEYJ391V	390 1/16W	[M]
R8	ERJ3GEYJ103V	10K 1/16W	[M]
R9	ERJ3GEYJ101V	100 1/16W	[M]
R10	ERJ3GEYJ101V	100 1/16W	[M]
R11	ERJ3GEYJ102V	1K 1/16W	[M]
R12	ERJ3GEYJ102V	1K 1/16W	[M]
R13	ERJ3GEY0R00V	0 1/16W	[M]
R14	ERJ3GEY0R00V	0 1/16W	[M]
R15	ERJ3GEYJ470V	47 1/16W	[M]
R16	ERJ3GEYJ470V	47 1/16W	[M]
R17	ERJ3GEYJ470V	47 1/16W	[M]
R19	ERJ3GEYJ470V	47 1/16W	[M]
R20	ERJ3GEYJ470V	47 1/16W	[M]
R21	ERJ3GEYJ470V	47 1/16W	[M]
R22	ERJ3GEYJ470V	47 1/16W	[M]
R23	ERJ3GEYJ104V	100K 1/16W	[M]
R24	ERJ3GEYJ104V	100K 1/16W	[M]
R25	ERJ3GEYJ470V	47 1/16W	[M]
R26	ERJ3GEYJ470V	47 1/16W	[M]
R31	ERJ6GEYJ102V	1K 1/10W	[M]
R32	ERJ6GEYJ102V	1K 1/10W	[M]
R33	ERJ6GEYJ104V	100K 1/10W	[M]
R34	ERJ6GEYJ104V	100K 1/10W	[M]
R39	ERJ6GEYJ104V	100K 1/10W	[M]
R40	ERJ6GEYJ104V	100K 1/10W	[M]
R43	ERJ3GEY0R00V	0 1/16W	[M]
R44	ERJ3GEY0R00V	0 1/16W	[M]
R45	ERJ3GEY0R00V	0 1/16W	[M]
R46	ERJ3GEY0R00V	0 1/16W	[M]
R53	ERJ3GEY0R00V	0 1/16W	[M]
R54	ERJ3GEY0R00V	0 1/16W	[M]
R55	ERJ3GEYJ104V	100K 1/16W	[M]
R57	ERJ3GEYJ470V	47 1/16W	[M]
R58	ERJ3GEYJ470V	47 1/16W	[M]
R59	ERJ3GEYJ104V	100K 1/16W	[M]
R62	ERJ3GEYJ104V	100K 1/16W	[M]
R64	ERJ3GEYJ470V	47 1/16W	[M]
R65	ERJ3GEYJ104V	100K 1/16W	[M]
R66	ERJ3GEY0R00V	0 1/16W	[M]
R2000	ERJ3GEYJ221V	220 1/16W	[M]
R2001	ERJ3GEYJ104V	100K 1/16W	[M]
R2002	ERJ3GEYJ221V	220 1/16W	[M]
R2003	ERJ3GEYJ221V	220 1/16W	[M]
R2004	ERJ3GEYJ221V	220 1/16W	[M]
R2005	ERJ3GEYJ221V	220 1/16W	[M]
R2006	ERJ3GEYJ221V	220 1/16W	[M]
R2009	ERJ3GEY0R00V	0 1/16W	[M]
R2010	ERJ3GEYJ102V	1K 1/16W	[M]
R2011	ERJ3GEYJ221V	220 1/16W	[M]
R2012	ERJ3GEYJ103V	10K 1/16W	[M]
R2014	ERJ3GEYJ273V	27K 1/16W	[M]
R2015	ERJ3GEYJ272V	2.7K 1/16W	[M]
R2016	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2017	ERJ3GEYJ273V	27K 1/16W	[M]
R2021	ERJ3GEYJ563V	56K 1/16W	[M]
R2022	ERJ3GEYJ103V	10K 1/16W	[M]
R2023	ERJ3GEYJ473V	47K 1/16W	[M]
R2024	ERJ3GEYJ273V	27K 1/16W	[M]
R2025	ERJ3GEYJ104V	100K 1/16W	[M]
R2027	ERJ3GEYJ221V	220 1/16W	[M]
R2031	ERJ3GEYJ221V	220 1/16W	[M]
R2032	ERJ3GEYJ473V	47K 1/16W	[M]
R2034	ERJ3GEYJ473V	47K 1/16W	[M]
R2037	ERJ3GEYJ473V	47K 1/16W	[M]
R2040	ERJ3GEYJ103V	10K 1/16W	[M]
R2041	ERJ3GEYJ223V	22K 1/16W	[M]
R2043	ERJ3GEYJ103V	10K 1/16W	[M]
R2045	ERJ3GEYJ103V	10K 1/16W	[M]
R2051	ERJ3GEYJ563V	56K 1/16W	[M]
R2052	ERJ3GEYJ221V	220 1/16W	[M]
R2054	ERJ3GEYJ221V	220 1/16W	[M]
R2055	ERJ3GEYJ103V	10K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2057	ERJ3GEYJ103V	10K 1/16W	[M]
R2059	ERJ3GEYJ103V	10K 1/16W	[M]
R2060	ERJ3GEYJ221V	220 1/16W	[M]
R2062	ERJ3GEYJ221V	220 1/16W	[M]
R2068	ERJ3GEYJ221V	220 1/16W	[M]
R2069	ERJ3GEYJ221V	220 1/16W	[M]
R2076	ERJ3GEYJ223V	22K 1/16W	[M]
R2077	ERJ3GEYJ103V	10K 1/16W	[M]
R2079	ERJ3GEYJ272V	2.7K 1/16W	[M]
R2080	ERJ3GEYJ103V	10K 1/16W	[M]
R2081	ERJ3GEYJ103V	10K 1/16W	[M]
R2082	ERJ3GEYJ821V	820 1/16W	[M]
R2084	ERJ3GEYJ473V	47K 1/16W	[M]
R2085	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2086	ERJ3GEYJ223V	22K 1/16W	[M]
R2087	ERJ3GEYJ223V	22K 1/16W	[M]
R2088	ERJ3GEYJ473V	47K 1/16W	[M]
R2089	ERJ3GEY0R00V	0 1/16W	[M]
R2092	ERJ3GEYJ221V	220 1/16W	[M]
R2093	ERJ3GEYJ103V	10K 1/16W	[M]
R2095	ERJ3GEYJ563V	56K 1/16W	[M]
R2096	ERJ3GEYJ473V	47K 1/16W	[M]
R2097	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2098	ERJ3GEYJ225V	2.2M 1/16W	[M]
R2099	ERJ3GEYJ104V	100K 1/16W	[M]
R2100	ERJ3GEYJ332V	3.3K 1/16W	[M]
R2101	ERJ3GEYJ103V	10K 1/16W	[M]
R2102	ERJ3GEYJ332V	3.3K 1/16W	[M]
R2103	ERJ3GEYJ273V	27K 1/16W	[M]
R2104	ERJ3GEY0R00V	0 1/16W	[M]
R2105	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2106	ERJ3GEYJ563V	56K 1/16W	[M]
R2111	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2112	ERJ3GEYJ102V	1K 1/16W	[M]
R2113	ERJ3GEY0R00V	0 1/16W	[M]
R2114	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2115	ERJ3GEYJ332V	3.3K 1/16W	[M]
R2116	ERJ3GEYJ102V	1K 1/16W	[M]
R2120	ERJ3GEY0R00V	0 1/16W	[M]
R2121	ERJ3GEYJ152V	1.5K 1/16W	[M]
R2122	ERJ3GEYJ103V	10K 1/16W	[M]
R2123	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2124	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2125	ERJ3GEYJ102V	1K 1/16W	[M]
R2126	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2127	ERJ3GEYJ153V	15K 1/16W	[M]
R2128	ERJ3GEYJ153V	15K 1/16W	[M]
R2129	ERJ3GEYJ333V	33K 1/16W	[M]
R2130	ERJ3GEYJ102V	1K 1/16W	[M]
R2133	ERJ3GEYJ103V	10K 1/16W	[M]
R2135	ERJ3GEYJ563V	56K 1/16W	[M]
R2136	ERJ3GEYJ473V	47K 1/16W	[M]
R2160	ERJ3GEYJ102V	1K 1/16W	[M]
R2161	ERJ3GEYJ473V	47K 1/16W	[M]
R2164	ERJ3GEYJ103V	10K 1/16W	[M]
R2165	ERJ3GEYJ103V	10K 1/16W	[M]
R2170	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2171	ERJ3GEYJ273V	27K 1/16W	[M]
R2172	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2173	ERJ3GEYJ273V	27K 1/16W	[M]
R2174	ERJ3GEYJ822V	8.2K 1/16W	[M]
R2175	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2176	ERJ3GEYJ183V	18K 1/16W	[M]
R2177	ERJ3GEYJ150V	15 1/16W	[M]
R2178	ERJ3GEYJ150V	15 1/16W	[M]
R2179	ERJ3GEYJ150V	15 1/16W	[M]
R2180	ERJ3GEYJ150V	15 1/16W	[M]
R2181	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2182	ERJ3GEY0R00V	0 1/16W	[M]
R2183	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2184	ERJ3GEYJ821V	820 1/16W	[M]
R2185	ERJ3GEY0R00V	0 1/16W	[M]
R2200	ERJ3GEYJ332V	3.3K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2201	ERJ3GEYJ103V	10K 1/16W	[M]
R2202	ERJ3GEYJ332V	3.3K 1/16W	[M]
R2203	ERJ3GEYJ273V	27K 1/16W	[M]
R2204	ERJ3GEY0R00V	0 1/16W	[M]
R2205	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2206	ERJ3GEYJ563V	56K 1/16W	[M]
R2211	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2212	ERJ3GEYJ102V	1K 1/16W	[M]
R2213	ERJ3GEY0R00V	0 1/16W	[M]
R2214	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2215	ERJ3GEYJ332V	3.3K 1/16W	[M]
R2216	ERJ3GEYJ102V	1K 1/16W	[M]
R2220	ERJ3GEY0R00V	0 1/16W	[M]
R2221	ERJ3GEYJ152V	1.5K 1/16W	[M]
R2222	ERJ3GEYJ103V	10K 1/16W	[M]
R2225	ERJ3GEYJ102V	1K 1/16W	[M]
R2226	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2227	ERJ3GEYJ153V	15K 1/16W	[M]
R2228	ERJ3GEYJ153V	15K 1/16W	[M]
R2229	ERJ3GEYJ333V	33K 1/16W	[M]
R2230	ERJ3GEYJ102V	1K 1/16W	[M]
R2233	ERJ3GEYJ103V	10K 1/16W	[M]
R2235	ERJ3GEYJ563V	56K 1/16W	[M]
R2236	ERJ3GEYJ473V	47K 1/16W	[M]
R2260	ERJ3GEYJ102V	1K 1/16W	[M]
R2261	ERJ3GEYJ473V	47K 1/16W	[M]
R2264	ERJ3GEYJ103V	10K 1/16W	[M]
R2265	ERJ3GEYJ103V	10K 1/16W	[M]
R2270	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2271	ERJ3GEYJ563V	56K 1/16W	[M]
R2273	ERJ3GEYJ273V	27K 1/16W	[M]
R2274	ERJ3GEYJ822V	8.2K 1/16W	[M]
R2275	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2276	ERJ3GEYJ183V	18K 1/16W	[M]
R2277	ERJ3GEYJ150V	15 1/16W	[M]
R2278	ERJ3GEYJ150V	15 1/16W	[M]
R2279	ERJ3GEYJ150V	15 1/16W	[M]
R2280	ERJ3GEYJ150V	15 1/16W	[M]
R2281	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2282	ERJ3GEY0R00V	0 1/16W	[M]
R2283	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2284	ERJ3GEYJ821V	820 1/16W	[M]
R2285	ERJ3GEY0R00V	0 1/16W	[M]
R2300	ERJ3GEYJ122V	1.2K 1/16W	[M]
R2301	ERJ3GEYJ123V	12K 1/16W	[M]
R2302	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2303	ERJ3GEYJ103V	10K 1/16W	[M]
R2304	ERJ3GEYJ123V	12K 1/16W	[M]
R2307	ERJ3GEY0R00V	0 1/16W	[M]
R2309	ERJ3GEY0R00V	0 1/16W	[M]
R2310	ERJ3GEYJ102V	1K 1/16W	[M]
R2312	ERJ3GEYJ152V	1.5K 1/16W	[M]
R2339	ERJ3GEYJ122V	1.2K 1/16W	[M]
R2400	ERJ3GEYJ122V	1.2K 1/16W	[M]
R2401	ERJ3GEYJ123V	12K 1/16W	[M]
R2402	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2403	ERJ3GEYJ103V	10K 1/16W	[M]
R2404	ERJ3GEYJ123V	12K 1/16W	[M]
R2407	ERJ3GEY0R00V	0 1/16W	[M]
R2409	ERJ3GEY0R00V	0 1/16W	[M]
R2410	ERJ3GEYJ102V	1K 1/16W	[M]
R2412	ERJ3GEYJ152V	1.5K 1/16W	[M]
R2439	ERJ3GEYJ122V	1.2K 1/16W	[M]
R2500	ERJ3GEYJ123V	12K 1/16W	[M]
R2501	ERJ3GEYJ223V	22K 1/16W	[M]
R2502	ERJ3GEYJ332V	3.3K 1/16W	[M]
R2503	ERJ3GEYJ103V	10K 1/16W	[M]
R2504	ERJ3GEYJ103V	10K 1/16W	[M]
R2510	ERJ3GEYJ332V	3.3K 1/16W	[M]
R2512	ERJ3GEYJ821V	820 1/16W	[M]
R2600	ERJ3GEYJ561V	560 1/16W	[M]
R2601	ERJ3GEYJ123V	12K 1/16W	[M]
R2609	ERJ3GEYJ332V	3.3K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2610	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2611	ERJ3GEYJ473V	47K 1/16W	[M]
R2612	ERJ3GEYJ563V	56K 1/16W	[M]
R2613	ERJ3GEYJ123V	12K 1/16W	[M]
R2614	ERJ3GEYJ273V	27K 1/16W	[M]
R2617	ERJ3GEYJ152V	1.5K 1/16W	[M]
R2626	ERJ3GEYJ103V	10K 1/16W	[M]
R2627	ERJ3GEYJ473V	47K 1/16W	[M]
R2661	ERJ3GEYJ680V	68 1/16W	[M]
R2662	ERJ3GEYJ680V	68 1/16W	[M]
R2668	ERJ3GEY0R00V	0 1/16W	[M]
R2751	ERJ3GEYJ471V	470 1/16W	[M]
R2752	ERJ3GEYJ103V	10K 1/16W	[M]
R2753	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2754	ERJ3GEYJ102V	1K 1/16W	[M]
R2755	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2756	ERJ3GEYJ101V	100 1/16W	[M]
R2757	ERJ3GEYJ473V	47K 1/16W	[M]
R2758	ERJ3GEYJ223V	22K 1/16W	[M]
R2759	ERJ3GEYJ223V	22K 1/16W	[M]
R2760	ERJ3GEYJ824V	820K 1/16W	[M]
R2761	ERJ3GEYJ824V	820K 1/16W	[M]
R2762	ERJ3GEYJ103V	10K 1/16W	[M]
R2763	ERJ3GEYJ103V	10K 1/16W	[M]
R2764	ERJ3GEYJ474V	470K 1/16W	[M]
R2765	ERJ3GEYJ474V	470K 1/16W	[M]
R2804	ERJ3GEYJ102V	1K 1/16W	[M]
R2809	ERJ3GEYJ750V	75 1/16W	[M]
R2812	ERJ3GEYJ750V	75 1/16W	[M]
R2813	ERJ3GEYJ750V	75 1/16W	[M]
R2816	ERJ3GEYJ750V	75 1/16W	[M]
R2862	ERJ3GEYJ103V	10K 1/16W	[M]
R2863	ERJ3GEYJ103V	10K 1/16W	[M]
R2864	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2865	ERJ3GEYJ182V	1.8K 1/16W	[M] PC
R2865	ERJ3GEYJ821V	820 1/16W	[M] P
R2900	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2902	ERJ3GEYJ470V	47 1/16W	[M]
R2903	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2905	ERJ3GEYJ390V	39 1/16W	[M]
R2906	ERJ3GEYF682V	6.8K 1/16W	[M]
R2907	ERJ3GEYJ272V	2.7K 1/16W	[M]
R2908	ERJ3GEYJ471V	470 1/16W	[M]
R2909	ERJ3GEYJ393V	39K 1/16W	[M]
R2910	ERJ3GEYJ331V	330 1/16W	[M]
R2911	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2912	ERJ3GEYJ331V	330 1/16W	[M]
R2913	ERG2SJ470E	47 2W	[M]
R2914	ERJ3GEYJ392V	3.9K 1/16W	[M]
R2915	ERJ3GEYJ272V	2.7K 1/16W	[M]
R2916	ERJ3GEYJ331V	330 1/16W	[M]
R2917	ERJ3GEYJ103V	10K 1/16W	[M]
R2919	ERJ3GEYJ102V	1K 1/16W	[M]
R2920	ERJ3GEYJ392V	3.9K 1/16W	[M]
R2921	ERJ3GEYJ391V	390 1/16W	[M]
R2922	ERJ3GEYF102V	1K 1/16W	[M]
R2923	ERJ3GEYF122V	1.2K 1/16W	[M]
R2925	ERX2SJ1R5E	1.5 2W	[M]
R2926	ERJ3GEYJ473V	47K 1/16W	[M]
R2927	ERX2SJ1R5E	1.5 2W	[M]
R2930	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2935	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2936	ERJ3GEYJ471V	470 1/16W	[M]
R2937	ERJ3GEYJ393V	39K 1/16W	[M]
R2938	ERJ3GEYJ333V	33K 1/16W	[M]
R2941	ERJ3GEYJ223V	22K 1/16W	[M]
R2946	ERJ3GEYJ330V	33 1/16W	[M]
R2947	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2948	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2952	ERJ3GEYJ392V	3.9K 1/16W	[M]
R2953	ERJ3GEYJ471V	470 1/16W	[M]
R2954	ERG2SJ470E	47 2W	[M]
R2973	ERX2SJ1R5E	1.5 2W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2975	ERJ3GEYJ153V	15K 1/16W	[M]
R2976	ERJ3GEYJ103V	10K 1/16W	[M]
R2990	ERJ3GEYJ473V	47K 1/16W	[M]
R2991	ERJ3GEYJ273V	27K 1/16W	[M]
R2992	ERJ3GEYJ473V	47K 1/16W	[M]
R2993	ERJ3GEYJ273V	27K 1/16W	[M]
R2994	ERJ3GEYJ473V	47K 1/16W	[M]
R2995	ERJ3GEYJ273V	27K 1/16W	[M]
R2996	ERJ3GEYJ473V	47K 1/16W	[M]
R2997	ERJ3GEYJ273V	27K 1/16W	[M]
R3901	ERJ2GEJ511X	510 1/32W	[M]
R3902	ERJ2GEJ103X	10K 1/32W	[M]
R3903	ERJ2GEJ103X	10K 1/32W	[M]
R3904	ERJ2GEJ472X	4.7K 1/32W	[M]
R3905	ERJ2GEJ202X	2K 1/32W	[M]
R3906	ERJ2GEJ472X	4.7K 1/32W	[M]
R3907	ERJ2GEJ222X	2.2K 1/32W	[M]
R3921	ERJ2GE0R00X	0 1/32W	[M]
R3924	ERJ2GE0R00X	0 1/32W	[M]
R3925	ERJ2GEJ103X	10K 1/32W	[M]
R3941	ERJ2GEJ273X	27K 1/32W	[M]
R3942	ERJ2GEJ224X	220K 1/32W	[M]
R3943	ERJ2GEJ104X	100K 1/32W	[M]
R3944	ERJ2GEJ221X	220 1/32W	[M]
R3945	ERJ2GEJ103X	10K 1/32W	[M]
R3946	ERJ2GEJ272X	2.7K 1/32W	[M]
R3947	ERJ2GEJ103X	10K 1/32W	[M]
R5000	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5001	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5002	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5003	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5004	ERJ8GEYJ100V	10 1/8W	[M]
R5005	ERJ8GEYJ100V	10 1/8W	[M]
R5006	ERJ1TYJ220U	22 1W	[M]
R5007	ERJ1TYJ220U	22 1W	[M]
R5008	ERJ3GEYJ101V	100 1/16W	[M]
R5010	ERJ8GEYJ100V	10 1/8W	[M]
R5011	ERJ8GEYJ100V	10 1/8W	[M]
R5018	ERJ3GEYJ683V	68K 1/16W	[M]
R5019	ERJ3GEYJ683V	68K 1/16W	[M]
R5020	ERJ3GEYJ124V	120K 1/16W	[M]
R5021	ERJ3GEYJ122V	1.2K 1/16W	[M]
R5022	ERJ3GEYJ122V	1.2K 1/16W	[M]
R5023	ERJ3GEYJ122V	1.2K 1/16W	[M]
R5030	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5031	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5032	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5033	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5034	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5035	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5036	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5037	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5103	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5104	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5110	ERJ3GEYJ223V	22K 1/16W	[M]
R5113	ERJ3GEYJ124V	120K 1/16W	[M]
R5118	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5119	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5200	ERJ8GEYJ100V	10 1/8W	[M]
R5201	ERJ8GEYJ100V	10 1/8W	[M]
R5204	ERJ3GEYJ101V	100 1/16W	[M]
R5205	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5206	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5207	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5208	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5209	ERJ1TYJ220U	22 1W	[M]
R5210	ERJ8GEYJ100V	10 1/8W	[M]
R5211	ERJ8GEYJ100V	10 1/8W	[M]
R5217	ERJ1TYJ220U	22 1W	[M]
R5218	ERJ3GEYJ683V	68K 1/16W	[M]
R5228	ERJ3GEYJ124V	120K 1/16W	[M]
R5300	ERJ1TYJ220U	22 1W	[M]
R5302	ERJ8GEYJ100V	10 1/8W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R5304	ERJ3GEYJ101V	100 1/16W	[M]
R5305	ERJ8GEYJ100V	10 1/8W	[M]
R5306	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5307	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5308	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5309	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5310	ERJ8GEYJ100V	10 1/8W	[M]
R5311	ERJ8GEYJ100V	10 1/8W	[M]
R5317	ERJ3GEYJ122V	1.2K 1/16W	[M]
R5318	ERJ3GEYJ124V	120K 1/16W	[M]
R5319	ERJ1TYJ220U	22 1W	[M]
R5327	ERJ3GEYJ122V	1.2K 1/16W	[M]
R5328	ERJ3GEYJ683V	68K 1/16W	[M]
R5400	ERJ1TYJ220U	22 1W	[M]
R5402	ERJ8GEYJ100V	10 1/8W	[M]
R5404	ERJ3GEYJ101V	100 1/16W	[M]
R5405	ERJ8GEYJ100V	10 1/8W	[M]
R5410	ERJ8GEYJ100V	10 1/8W	[M]
R5411	ERJ8GEYJ100V	10 1/8W	[M]
R5419	ERJ1TYJ220U	22 1W	[M]
R5504	ERJ3GEYJ220V	22 1/16W	[M]
R5505	ERJ3GEYJ101V	100 1/16W	[M]
R5506	ERJ3GEYJ105V	1M 1/16W	[M]
R5507	ERJ3GEYJ105V	1M 1/16W	[M]
R5508	ERJ3GEYJ105V	1M 1/16W	[M]
R5510	ERG2SJ271E	270 2W	[M]
R5511	ERJ3GEYJ220V	22 1/16W	[M]
R5602	ERJ3GEYJ103V	10K 1/16W	[M]
R5603	ERJ3GEYJ103V	10K 1/16W	[M]
R5604	ERJ3GEYJ122V	1.2K 1/16W	[M]
R5606	ERJ3GEYJ103V	10K 1/16W	[M]
R5607	ERJ3GEYJ122V	1.2K 1/16W	[M]
R5608	ERJ3GEYJ103V	10K 1/16W	[M]
R5609	ERJ3GEYJ103V	10K 1/16W	[M]
R5610	ERJ3GEYJ122V	1.2K 1/16W	[M]
R5611	ERJ3GEYJ122V	1.2K 1/16W	[M]
R5636	ERDS1FVJ392T	3.9K 1/2W	[M]
R5637	ERJ3GEYJ100V	10 1/16W	[M]
R5639	ERJ3GEYJ332V	3.3K 1/16W	[M]
R5640	ERJ3GEY0R00V	0 1/16W	[M]
R5654	ERJ3GEYJ563V	56K 1/16W	[M]
R5655	ERJ3GEYJ103V	10K 1/16W	[M]
R5656	ERJ3GEYJ103V	10K 1/16W	[M]
R5657	ERJ3GEYJ103V	10K 1/16W	[M]
R5658	ERJ3GEYJ185V	1.8M 1/16W	[M]
R5659	ERJ3GEYJ104V	100K 1/16W	[M]
R5660	ERJ3GEYJ103V	10K 1/16W	[M]
R5670	ERJ3GEY0R00V	0 1/16W	[M]
R5701	ERDS1TJ474B	470K 1/2W	[M]
R5702	ERJ1TYJ333U	33K 1/8W	[M]
R5703	ERJ1TYJ333U	33K 1/8W	[M]
R5704	ERJ8GEYJ394V	390K 1/8W	[M]
R5705	ERJ8GEYJ394V	390K 1/8W	[M]
R5720	ERJ6GEYJ220V	22 1/10W	[M]
R5721	ERJ6GEYJ392V	3.9K 1/10W	[M]
R5722	ERJ6GEYJ182V	1.8K 1/10W	[M]
R5723	ERJ3GEYJ102V	1K 1/16W	[M]
R5724	ERJ6GEYJ331V	330 1/10W	[M]
R5725	ERJ3GEYJ681V	680 1/16W	[M]
R5726	D0MB34MZ0001	0.033 1W	[M]
R5727	D0MB34MZ0001	0.033 1W	[M]
R5728	ERJ3GEYJ104V	100K 1/16W	[M]
R5729	ERJ6GEYJ103V	10K 1/10W	[M]
R5730	ERJ6GEYJ332V	3.3K 1/10W	[M]
R5731	D0MB34MZ0001	0.033 1W	[M]
R5732	D0MB34MZ0001	0.033 1W	[M]
R5750	ERJ3GEY0R00V	0 1/16W	[M]
R5786	ERG2SJ683E	68K 2W	[M]
R5787	ERJ3GEYJ753V	75K 1/16W	[M]
R5795	ERJ6GEYJ433V	43K 1/10W	[M]
R5796	ERJ6GEYJ222V	2.2K 1/10W	[M]
R5797	ERJ6GEYJ472V	4.7K 1/10W	[M]
R5798	ERJ6GEYJ100V	10 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R5800	ERJ6GEYJ103V	10K 1/10W	[M]
R5801	ERJ3GEYJ123V	12K 1/16W	[M]
R5802	ERJ3RBD272V	2.7K 1/16W	[M]
R5803	ERJ3GEY0R00V	0 1/16W	[M]
R5804	ERJ6RBD473V	47K 1/10W	[M]
R5805	ERJ3RBD222V	2.2K 1/16W	[M]
R5806	ERJ3GEYJ153V	15K 1/16W	[M]
R5807	ERJ6GEYJ331V	330 1/10W	[M]
R5808	ERJ6GEYJ222V	2.2K 1/10W	[M]
R5809	ERJ6GEYJ331V	330 1/10W	[M]
R5810	ERJ3GEYJ331V	330 1/16W	[M]
R5811	ERJ8GEYJ152V	1.5K 1/8W	[M]
R5812	ERJ3RBD822V	8.2K 1/16W	[M]
R5813	ERJ3RBD243V	24K 1/16W	[M]
R5815	ERJ3GEYJ272V	2.7K 1/16W	[M]
R5816	ERJ8GEYJ152V	1.5K 1/8W	[M]
R5817	ERJ3GEYJ331V	330 1/16W	[M]
R5820	ERG2SJ470E	47 2W	[M]
R5821	ERG2SJ470E	47 2W	[M]
R5822	ERG2SJ470E	47 2W	[M]
R5823	ERG2SJ470E	47 2W	[M]
R5824	ERG2SJ470E	47 2W	[M]
R5825	ERJ3GEYJ102V	1K 1/16W	[M]
R5832	ERJ1TYJ222U	2.2K 1/8W	[M]
R5834	ERJ1TYJ222U	2.2K 1/8W	[M]
R5860	ERJ6GEYF103V	10K 1/10W	[M]
R5861	ERJ6GEYF822V	8.2K 1/10W	[M]
R5862	ERJ6GEYF103V	10K 1/10W	[M]
R5863	ERJ6GEYF103V	10K 1/10W	[M]
R5864	ERJ6GEYF103V	10K 1/10W	[M]
R5890	ERJ3GEYJ222V	2.2K 1/16W	[M]
R5891	ERJ3RBD472V	4.7K 1/16W	[M]
R5892	ERJ3RBD561V	560 1/16W	[M]
R5893	ERJ3RBD122V	1.2K 1/16W	[M]
R5894	ERJ3GEYJ331V	330 1/16W	[M]
R5895	ERJ3GEYJ681V	680 1/16W	[M]
R5896	ERJ3GEYJ104V	100K 1/16W	[M]
R5897	ERJ3GEYJ101V	100 1/16W	[M]
R6131	ERJ3GEYJ223V	22K 1/16W	[M]P
R6132	ERJ3GEYJ153V	15K 1/16W	[M]
R6190	ERJ3GEYJ473V	47K 1/16W	[M]
R6191	ERJ3GEYJ221V	220 1/16W	[M]
R6192	ERJ3GEYJ473V	47K 1/16W	[M]
R6193	ERJ3GEYJ182V	1.8K 1/16W	[M]
R6194	ERJ3GEYJ563V	56K 1/16W	[M]
R6195	ERJ3GEYJ103V	10K 1/16W	[M]
R6197	ERJ3GEYJ222V	2.2K 1/16W	[M]
R6231	ERJ3GEY0R00V	0 1/16W	[M]
R6290	ERJ3GEYJ335V	3.3M 1/16W	[M]
R6291	ERJ3GEYJ154V	150K 1/16W	[M]
R6292	ERJ3GEYJ101V	100 1/16W	[M]
R6293	ERJ3GEYJ273V	27K 1/16W	[M]
R6294	ERJ3GEYJ222V	2.2K 1/16W	[M]
R6801	ERJ3GEYJ472V	4.7K 1/16W	[M]
R6802	ERJ3GEYJ272V	2.7K 1/16W	[M]
R6803	ERJ3GEYJ122V	1.2K 1/16W	[M]
R6804	ERJ3GEYJ102V	1K 1/16W	[M]
R6805	ERJ3GEYJ102V	1K 1/16W	[M]
R6807	ERJ3GEYJ223V	22K 1/16W	[M]
R6809	ERJ3GEYJ223V	22K 1/16W	[M]
R6810	ERJ3GEYJ682V	6.8K 1/16W	[M]
R6812	ERJ3GEYJ182V	1.8K 1/16W	[M]
R6914	ERJ3GEYJ563V	56K 1/16W	[M]
R6916	ERJ3GEYJ680V	68 1/16W	[M]
R6917	ERJ3GEYJ680V	68 1/16W	[M]
R6918	ERJ3GEYJ223V	22K 1/16W	[M]
R6922	ERJ3GEYJ102V	1K 1/16W	[M]
R6923	ERJ3GEYJ102V	1K 1/16W	[M]
R6924	ERJ3GEYJ122V	1.2K 1/16W	[M]
R6925	ERJ3GEYJ182V	1.8K 1/16W	[M]
R6926	ERJ3GEYJ222V	2.2K 1/16W	[M]
R6927	ERJ3GEYJ680V	68 1/16W	[M]
R6928	ERJ3GEYJ272V	2.7K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R6934	ERJ3GEYJ470V	47 1/16W	[M]
R6935	ERJ3GEYJ471V	470 1/16W	[M]
R6939	ERJ3GEY0R00V	0 1/16W	[M]
R6940	ERJ3GEY0R00V	0 1/16W	[M]
R6941	ERJ3GEYJ221V	220 1/16W	[M]
R6942	ERJ3GEYJ221V	220 1/16W	[M]
R6943	ERJ3GEYJ221V	220 1/16W	[M]
R6944	ERJ3GEYJ221V	220 1/16W	[M]
R6945	ERJ3GEYJ221V	220 1/16W	[M]
R6947	ERJ3GEYJ472V	4.7K 1/16W	[M]
R6948	ERJ3GEYJ221V	220 1/16W	[M]
R6949	ERJ3GEYJ221V	220 1/16W	[M]
R6950	ERJ3GEYJ122V	1.2K 1/16W	[M]
R6951	ERJ3GEYJ122V	1.2K 1/16W	[M]
R6952	ERJ3GEYJ221V	220 1/16W	[M]
R6953	ERJ3GEYJ221V	220 1/16W	[M]
R6954	ERJ3GEYJ221V	220 1/16W	[M]
R6955	ERJ3GEYJ221V	220 1/16W	[M]
R6956	ERJ3GEYJ221V	220 1/16W	[M]
R6958	ERJ3GEYJ680V	68 1/16W	[M]
R6959	ERJ3GEYJ103V	10K 1/16W	[M]
R6960	ERJ3GEYJ222V	2.2K 1/16W	[M]
R7101	ERJ3GEYJ222V	2.2K 1/16W	[M]
R7201	ERJ3GEYJ222V	2.2K 1/16W	[M]
R7750	ERJ3GEYJ331V	330 1/16W	[M]
R7752	ERJ3GEYJ472V	4.7K 1/16W	[M]
R7753	ERJ3GEYJ331V	330 1/16W	[M]
R7780	ERJ3GEYJ331V	330 1/16W	[M]
R7781	ERJ3GEYJ103V	10K 1/16W	[M]
R8001	ERJ2GEJ103X	10K 1/32W	[M]
R8003	ERJ2GEJ103X	10K 1/32W	[M]
R8011	ERJ2GEJ220X	22 1/32W	[M]
R8011	ERJ3GEYJ102V	1K 1/16W	[M]
R8012	ERJ2GEJ220X	22 1/32W	[M]
R8012	ERJ3GEYJ102V	1K 1/16W	[M]
R8013	ERJ2GEJ220X	22 1/32W	[M]
R8013	ERJ3GEYJ102V	1K 1/16W	[M]
R8014	ERJ3GEYJ224V	220K 1/16W	[M]
R8015	ERJ3GEYJ334V	330K 1/16W	[M]
R8041	ERJ2GEJ330X	33 1/32W	[M]
R8100	ERJ3GEYJ473V	47K 1/16W	[M]
R8101	ERJ3GEYJ103V	10K 1/16W	[M]
R8102	ERJ3GEYJ103V	10K 1/16W	[M]
R8103	ERJ3GEYJ103V	10K 1/16W	[M]
R8104	ERJ3GEYJ103V	10K 1/16W	[M]
R8153	ERJ2RHD621X	620 1/32W	[M]
R8154	ERJ2RHD102X	1K 1/32W	[M]
R8200	ERJ3GEYJ473V	47K 1/16W	[M]
R8201	ERJ3GEYJ103V	10K 1/16W	[M]
R8202	ERJ3GEYJ103V	10K 1/16W	[M]
R8203	ERJ3GEYJ103V	10K 1/16W	[M]
R8204	ERJ3GEYJ103V	10K 1/16W	[M]
R8211	ERJ2GEJ103X	10K 1/32W	[M]
R8221	ERJ2GEJ822X	8.2K 1/32W	[M]
R8225	ERJ2GEJ822X	8.2K 1/32W	[M]
R8230	ERJ2GEJ222X	2.2K 1/32W	[M]
R8231	ERJ2GEJ223X	22K 1/32W	[M]
R8232	ERJ2GEJ752X	7.5K 1/32W	[M]
R8251	ERJ6GEYJ6R8V	6.8 1/10W	[M]
R8261	ERJ2GEJ823X	82K 1/32W	[M]
R8262	ERJ2GEJ153X	15K 1/32W	[M]
R8263	ERJ2GEJ823X	82K 1/32W	[M]
R8264	ERJ2GEJ153X	15K 1/32W	[M]
R8311	ERJ2RHD242X	2.4K 1/32W	[M]
R8312	ERJ2RHD102X	1K 1/32W	[M]
R8313	ERJ2RHD153X	15K 1/32W	[M]
R8314	ERJ2RHD153X	15K 1/32W	[M]
R8321	ERJ3RBD201V	200 1/16W	[M]
R8322	ERJ3GEY0R00V	0 1/16W	[M]
R8323	ERJ2GEJ330X	33 1/32W	[M]
R8324	ERJ2GEJ102X	1K 1/32W	[M]
R8325	ERJ3RBD201V	200 1/16W	[M]
R8326	ERJ3GEY0R00V	0 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R8327	ERJ2GEJ330X	33 1/32W	[M]
R8328	ERJ2GEJ102X	1K 1/32W	[M]
R8331	ERJ3RBD201V	200 1/16W	[M]
R8332	ERJ3GEY0R00V	0 1/16W	[M]
R8333	ERJ2GEJ330X	33 1/32W	[M]
R8334	ERJ2GEJ102X	1K 1/32W	[M]
R8335	ERJ3RBD201V	200 1/16W	[M]
R8336	ERJ2GEJ330X	33 1/32W	[M]
R8337	ERJ2GEJ102X	1K 1/32W	[M]
R8341	ERJ3RBD201V	200 1/16W	[M]
R8342	ERJ2GEJ330X	33 1/32W	[M]
R8343	ERJ2GEJ102X	1K 1/32W	[M]
R8401	ERJ2GEJ101X	100 1/32W	[M]
R8402	ERJ2GEJ100X	10 1/32W	[M]
R8420	ERJ2GEJ222X	2.2K 1/32W	[M]
R8421	ERJ2GE0R00X	0 1/32W	[M]
R8531	ERJ2GEJ152X	1.5K 1/32W	[M]
R8532	ERJ2GEJ222X	2.2K 1/32W	[M]
R8533	ERJ2GE0R00X	0 1/32W	[M]
R8541	ERJ2GEJ153X	15K 1/32W	[M]
R8551	ERJ2GE0R00X	0 1/32W	[M]
R8552	ERJ2GEJ102X	1K 1/32W	[M]
R8553	ERJ2GEJ102X	1K 1/32W	[M]
R8554	ERJ2GEJ680X	68 1/32W	[M]
R8555	ERJ2GEJ2R2X	2.2 1/32W	[M]
R8556	ERJ3GEYJ560V	56 1/16W	[M]
R8557	ERJ3GEYJ510V	51 1/16W	[M]
R8558	ERJ2GEJ473X	47K 1/32W	[M]
R8559	ERJ2GEJ153X	15K 1/32W	[M]
R8561	ERJ2GE0R00X	0 1/32W	[M]
R8562	ERJ2GEJ102X	1K 1/32W	[M]
R8563	ERJ2GEJ102X	1K 1/32W	[M]
R8564	ERJ2GEJ220X	22 1/32W	[M]
R8565	ERJ2GEJ2R2X	2.2 1/32W	[M]
R8566	ERJ3GEYJ560V	56 1/16W	[M]
R8567	ERJ3GEYJ510V	51 1/16W	[M]
R8568	ERJ2GEJ473X	47K 1/32W	[M]
R8601	ERJ2GEJ104X	100K 1/32W	[M]
R8611	ERJ2GEJ101X	100 1/32W	[M]
R8613	ERJ2GEJ101X	100 1/32W	[M]
R8621	ERJ2GEJ105X	1M 1/32W	[M]
R8622	ERJ2RHD102X	1K 1/32W	[M]
R8901	ERJ2GEJ470X	47 1/32W	[M]
R9007	ERJ2GEJ103X	10K 1/32W	[M]
R9011	ERJ2GE0R00X	0 1/32W	[M]
R9012	ERJ2GE0R00X	0 1/32W	[M]
R9013	ERJ2GE0R00X	0 1/32W	[M]
R9014	ERJ2GE0R00X	0 1/32W	[M]
R9015	ERJ2GE0R00X	0 1/32W	[M]
R9016	ERJ2GE0R00X	0 1/32W	[M]
R9017	ERJ2GE0R00X	0 1/32W	[M]
R9022	ERJ2GE0R00X	0 1/32W	[M]
R9023	ERJ2GE0R00X	0 1/32W	[M]
R9024	ERJ2GEJ103X	10K 1/32W	[M]
R9025	ERJ2GEJ103X	10K 1/32W	[M]
R9026	ERJ2GEJ103X	10K 1/32W	[M]
R9027	ERJ2GEJ103X	10K 1/32W	[M]
R9028	ERJ2GEJ103X	10K 1/32W	[M]
R9029	ERJ2GEJ103X	10K 1/32W	[M]
R9036	ERJ2GEJ103X	10K 1/32W	[M]
R9037	ERJ2GEJ103X	10K 1/32W	[M]
R9038	ERJ2GEJ103X	10K 1/32W	[M]
R9040	ERJ2GEJ103X	10K 1/32W	[M]
R9041	ERJ2GEJ103X	10K 1/32W	[M]
R9042	ERJ2GEJ103X	10K 1/32W	[M]
R9045	ERJ2GEJ103X	10K 1/32W	[M]
R9055	ERJ2GEJ103X	10K 1/32W	[M]
R9080	ERJ2GEJ103X	10K 1/32W	[M]
R9082	ERJ2GEJ103X	10K 1/32W	[M]
R9083	ERJ2GEJ470X	47 1/32W	[M]
R9084	ERJ2GEJ470X	47 1/32W	[M]
R9085	ERJ2GEJ470X	47 1/32W	[M]
R9086	ERJ2GEJ470X	47 1/32W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R9087	ERJ2GEJ470X	47 1/32W	[M]
R9088	ERJ2GEJ470X	47 1/32W	[M]
RX3707	D1H84714A024	CHIP RESISTOR	[M]
RX3708	D1H84714A024	CHIP RESISTOR	[M]
RX3901	D1H410120001	CHIP RESISTOR	[M]
RX8001	D1H410320002	CHIP RESISTOR	[M]
RX8011	D1H88204A024	CHIP RESISTOR	[M]
RX8012	D1H88204A024	CHIP RESISTOR	[M]
RX8013	D1H88204A024	CHIP RESISTOR	[M]
RX8014	D1H88204A024	CHIP RESISTOR	[M]
RX8015	D1H88204A024	CHIP RESISTOR	[M]
RX8016	D1H88204A024	CHIP RESISTOR	[M]
RX8017	D1H88204A024	CHIP RESISTOR	[M]
RX8018	D1H422020001	CHIP RESISTOR	[M]
RX8019	D1H422020001	CHIP RESISTOR	[M]
RX8020	D1H422020001	CHIP RESISTOR	[M]
RX8031	D1H447220001	CHIP RESISTOR	[M]
RX8032	D1H447220001	CHIP RESISTOR	[M]
RX8111	D1H422320002	CHIP RESISTOR	[M]
RX8401	D1H410120001	CHIP RESISTOR	[M]
RX8402	D1H410120001	CHIP RESISTOR	[M]
RX8531	D1H456020001	CHIP RESISTOR	[M]
RX8532	D1H85604A024	CHIP RESISTOR	[M]
RX8533	D1H456020001	CHIP RESISTOR	[M]
RX8534	D1H456020001	CHIP RESISTOR	[M]
RX8611	D1H447220001	CHIP RESISTOR	[M]
RX8691	D1H410320002	CHIP RESISTOR	[M]
RX9014	D1H85604A024	CHIP RESISTOR	[M]
RX9015	D1H85604A024	CHIP RESISTOR	[M]
RX9016	D1H85604A024	CHIP RESISTOR	[M]
RX9017	D1H85604A024	CHIP RESISTOR	[M]
RX9018	D1H447220001	CHIP RESISTOR	[M]
RX9019	D1H8R0040009	CHIP RESISTOR	[M]
RX9020	D1H447220001	CHIP RESISTOR	[M]
K2101	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K2801	ERJ6GEY0R00V	CHIP RESISTOR	[M]
K3903	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K3905	ERJ2GE0R00X	CHIP RESISTOR	[M]
K3908	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K5500	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K6100	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K8251	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2501	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2502	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2503	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2504	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2505	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2506	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2507	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2508	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2509	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2510	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2511	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2512	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2513	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2514	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2515	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2516	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2517	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2519	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2520	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2521	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2522	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2523	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2524	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2525	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2526	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2527	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2528	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2529	ERJ3GEY0R00V	CHIP RESISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
W2531	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2532	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2533	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2534	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2536	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2537	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2539	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2540	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2541	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2542	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2543	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2544	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2545	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2546	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2547	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2548	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2550	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2551	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2552	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2553	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2554	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2555	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2556	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2557	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2558	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2560	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2561	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2562	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2563	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2564	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2565	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2566	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2567	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2568	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2569	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2572	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2574	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2575	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2576	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2578	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2579	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2581	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2582	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2583	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2587	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2591	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2592	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2593	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2594	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2595	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2596	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2597	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2598	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2599	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2600	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2601	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2602	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2603	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2604	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2606	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2607	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2608	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2610	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2611	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2612	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2613	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W2615	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2657	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2801	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2802	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2901	ERJ3GEY0R00V	CHIP RESISTOR	[M]P
W2903	ERJ3GEY0R00V	CHIP RESISTOR	[M]PC
W2906	ERJ3GEY0R00V	CHIP RESISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
W2909	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2910	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2912	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2913	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2914	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2915	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W5032	ERJ8GEY0R00V	CHIP RESISTOR	[M]
W5801	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W5802	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W5803	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W5804	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W5805	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W5806	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W6301	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W6302	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W6303	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W6851	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W6853	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W6854	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W6855	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W6856	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W6857	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W6858	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W6859	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W6860	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W6861	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W6862	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W6893	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W6894	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W7502	ERJ6GEY0R00V	CHIP RESISTOR	[M]
		CAPACITORS	
C1	ECJ1VB1H104K	0.1 50V	[M]
C2	ECJ1VB1H104K	0.1 50V	[M]
C3	ECJ1VB1H104K	0.1 50V	[M]
C4	ECJ1VB1H104K	0.1 50V	[M]
C5	ECJ1VB1H104K	0.1 50V	[M]
C6	F1H1H5R0A502	5P 50V	[M]
C7	F1H1H5R0A502	5P 50V	[M]
C9	ECJ1VB1H104K	0.1 50V	[M]
C10	ECJ1VB1H104K	0.1 50V	[M]
C11	F2A1A220A204	22 10V	[M]
C12	ECJ1VB1H104K	0.1 50V	[M]
C13	ECJ1VB1H104K	0.1 50V	[M]
C14	ECJ1VB1H104K	0.1 50V	[M]
C15	F3F1A106A046	10 10V	[M]
C16	F2A1A220A204	22 10V	[M]
C17	ECJ1VB1H104K	0.1 50V	[M]
C18	ECJ1VB1H104K	0.1 50V	[M]
C19	ECJ1VB1H104K	0.1 50V	[M]
C20	ECJ1VB1H104K	0.1 50V	[M]
C21	ECJ1VB1H104K	0.1 50V	[M]
C22	ECJ1VB1H104K	0.1 50V	[M]
C27	F2A1A220A204	22 10V	[M]
C28	ECJ1VC1H390J	39P 50V	[M]
C37	F3F1A106A046	10 10V	[M]
C38	F3F1A106A046	10 10V	[M]
C42	ECJ1VB1H103K	0.01 50V	[M]
C2000	ECJ1VB1H104K	0.1 50V	[M]
C2001	ECJ1VB1H104K	0.1 50V	[M]
C2002	ECJ1VB1H104K	0.1 50V	[M]
C2003	ECEA1EKS220B	22 25V	[M]
C2006	ECEA1HKS2R2B	2.2 50V	[M]
C2007	ECJ1VB1C104K	0.1 16V	[M]
C2008	ECEA0JKS101B	100 6.3V	[M]
C2009	ECJ1VB1C104K	0.1 16V	[M]
C2010	ECJ1VB1H331K	330P 50V	[M]
C2011	ECJ1VB1H331K	330P 50V	[M]
C2012	ECJ1VB1H331K	330P 50V	[M]
C2013	ECJ1VB1H223K	0.022 50V	[M]
C2014	ECEA1EKS4R7B	4.7 25V	[M]
C2015	ECJ1VB1H221K	220P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2016	ECJ1VB1H221K	220P 50V	[M]
C2017	ECJ1VB1H103K	0.01 50V	[M]
C2018	ECEA1CKS470B	47 16V	[M]
C2019	ECEA1CKS470B	47 16V	[M]
C2020	ECJ1VB1H103K	0.01 50V	[M]
C2021	ECA1AM221B	220 10V	[M]
C2025	ECJ1VB1H221K	220P 50V	[M]
C2101	ECJ1VB1A105K	1 10V	[M]
C2102	ECJ1VB1C473K	0.047 16V	[M]
C2103	ECJ1VB1A105K	1 10V	[M]
C2104	ECJ1VB1C563K	0.056 16V	[M]
C2106	ECJ1VB1H152K	1500P 50V	[M]
C2108	ECJ1VB1H682K	6800P 50V	[M]
C2111	ECJ1VB1A105K	1 10V	[M]
C2112	ECJ1VB1H272K	2700P 50V	[M]
C2113	ECJ1VB1H152K	1500P 50V	[M]
C2114	ECJ1VB1H562K	5600P 50V	[M]
C2115	ECJ1VB1H331K	330P 50V	[M]
C2117	ECJ1VB1C104K	0.1 16V	[M]
C2118	ECJ1VB1C104K	0.1 16V	[M]
C2119	ECJ1VB1C105K	1 16V	[M]
C2121	ECJ1VB1C104K	0.1 16V	[M]
C2122	ECJ1VB1H102K	1000P 50V	[M]
C2123	ECJ1VB1C105K	1 16V	[M]
C2124	ECJ1VB1H102K	1000P 50V	[M]
C2125	ECJ1VC1H101J	100P 50V	[M]
C2126	ECJ1VB1C105K	1 16V	[M]
C2127	ECJ1VB1H104K	0.1 50V	[M]
C2128	ECJ1VC1H470J	47P 50V	[M]
C2129	ECJ1VB1H104K	0.1 50V	[M]
C2130	ECJ1VB1H332K	3300P 50V	[M]
C2161	ECJ1VB1C393K	0.039 16V	[M]
C2162	ECJ1VB1H332K	3300P 50V	[M]
C2164	ECJ1VB1H221K	220P 50V	[M]
C2169	ECJ1VB1H103K	0.01 50V	[M]
C2171	ECEA1EKS4R7B	4.7 25V	[M]
C2177	ECEA1HKS010B	1 50V	[M]
C2178	ECJ1VC1H101J	100P 50V	[M]
C2179	ECJ1VC1H151K	150P 50V	[M]
C2180	ECJ1VB1C104K	0.1 16V	[M]
C2181	ECJ1VB1H102K	1000P 50V	[M]
C2191	ECJ1VB1C105K	1 16V	[M]
C2201	ECJ1VB1A105K	1 10V	[M]
C2202	ECJ1VB1C473K	0.047 16V	[M]
C2203	ECJ1VB1A105K	1 10V	[M]
C2204	ECJ1VB1C563K	0.056 16V	[M]
C2206	ECJ1VB1H152K	1500P 50V	[M]
C2208	ECJ1VB1H682K	6800P 50V	[M]
C2211	ECJ1VB1A105K	1 10V	[M]
C2212	ECJ1VB1H272K	2700P 50V	[M]
C2213	ECJ1VB1H152K	1500P 50V	[M]
C2214	ECJ1VB1H562K	5600P 50V	[M]
C2215	ECJ1VB1H331K	330P 50V	[M]
C2217	ECJ1VB1C104K	0.1 16V	[M]
C2218	ECJ1VB1C104K	0.1 16V	[M]
C2219	ECJ1VB1C105K	1 16V	[M]
C2221	ECJ1VB1C104K	0.1 16V	[M]
C2222	ECJ1VB1H102K	1000P 50V	[M]
C2223	ECJ1VB1C105K	1 16V	[M]
C2224	ECJ1VB1H102K	1000P 50V	[M]
C2225	ECJ1VC1H101J	100P 50V	[M]
C2226	ECJ1VB1C105K	1 16V	[M]
C2227	ECJ1VB1H104K	0.1 50V	[M]
C2228	ECJ1VC1H470J	47P 50V	[M]
C2229	ECJ1VB1H104K	0.1 50V	[M]
C2230	ECJ1VB1H332K	3300P 50V	[M]
C2261	ECJ1VB1C393K	0.039 16V	[M]
C2262	ECJ1VB1H332K	3300P 50V	[M]
C2264	ECJ1VB1H221K	220P 50V	[M]
C2277	ECEA1HKS010B	1 50V	[M]
C2278	ECJ1VC1H101J	100P 50V	[M]
C2279	ECJ1VC1H151K	150P 50V	[M]
C2280	ECJ1VB1C104K	0.1 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2281	ECJ1VB1H102K	1000P 50V	[M]
C2291	ECJ1VB1C105K	1 16V	[M]
C2300	ECJ1VB1A105K	1 10V	[M]
C2301	ECJ2YB0J475K	47 6.3V	[M]
C2302	ECJ1VB1C393K	0.039 16V	[M]
C2303	ECJ1VB1C473K	0.047 16V	[M]
C2304	ECJ2YB0J475K	4.7 6.3V	[M]
C2305	ECJ1VB1H332K	3300P 50V	[M]
C2306	ECJ1VB1A154K	0.15 10V	[M]
C2307	ECJ1VB1C105K	1 16V	[M]
C2308	ECJ1VB1H223K	0.022 50V	[M]
C2309	ECJ1VB1C823K	0.082 16V	[M]
C2310	ECJ1VB1H223K	0.022 50V	[M]
C2313	ECJ1VB1H682K	6800P 50V	[M]
C2315	ECJ1VB1H681K	680P 50V	[M]
C2316	ERJ3GEY0R00V	0 1/16W	[M]
C2400	ECJ1VB1A105K	1 10V	[M]
C2401	ECJ2YB0J475K	4.7 6.3V	[M]
C2402	ECJ1VB1C393K	0.039 16V	[M]
C2403	ECJ1VB1C473K	0.047 16V	[M]
C2404	ECJ2YB0J475K	4.7 6.3V	[M]
C2405	ECJ1VB1H332K	3300P 50V	[M]
C2406	ECJ1VB1A154K	0.15 10V	[M]
C2407	ECJ1VB1C105K	1 16V	[M]
C2408	ECJ1VB1H223K	0.022 50V	[M]
C2413	ECJ1VB1H682K	6800P 50V	[M]
C2415	ECJ1VB1H681K	680P 50V	[M]
C2416	ERJ3GEY0R00V	0 1/16W	[M]
C2500	ECJ1VB1A105K	1 10V	[M]
C2501	ECEA1EKS4R7B	4.7 25V	[M]
C2502	ECJ1VB1C473K	0.047 16V	[M]
C2503	ECJ1VB1C473K	0.047 16V	[M]
C2504	ECJ1VB1H681K	680P 50V	[M]
C2509	ECJ1VB1H472K	4700P 50V	[M]
C2600	ECJ1VB1A105K	1 10V	[M]
C2601	ECEA1EKS220B	22 25V	[M]
C2602	ECEA1EKS4R7B	4.7 25V	[M]
C2603	ECJ1VB1H223K	0.022 50V	[M]
C2604	ECEA1EKS4R7B	4.7 25V	[M]
C2605	ECJ1VB1H222K	2200P 50V	[M]
C2609	ECJ1VB1A334K	0.33 10V	[M]
C2610	ECJ1VB1A224K	0.22 10V	[M]
C2611	ECJ1VB1A474K	0.47 10V	[M]
C2612	ECJ1VB1H682K	6800P 50V	[M]
C2617	ECJ1VB1A124K	0.12 10V	[M]
C2751	ECJ1VB1A105K	1 10V	[M]
C2752	ECJ1VB1H103K	0.01 50V	[M]
C2753	ECJ1VB1H103K	0.01 50V	[M]
C2754	ECJ1VC1H101J	100P 50V	[M]
C2755	ECJ1VC1H101J	100P 50V	[M]
C2756	ECJ1VB1H104K	0.1 50V	[M]
C2757	ECJ1VB1H104K	0.1 50V	[M]
C2802	ECEA0JKS101B	100 6.3V	[M]
C2805	ECEA0JKS101B	100 6.3V	[M]
C2806	ECEA0JKS101B	100 6.3V	[M]
C2807	ECJ1VB1H103K	0.01 50V	[M]
C2808	ECA1AM221B	220 10V	[M]
C2809	ECEA1EKS220B	22 25V	[M]
C2810	ECJ1VB1H103K	0.01 50V	[M]
C2811	ECJ1VB1C104K	0.1 16V	[M]
C2812	ECJ1VB1C104K	0.1 16V	[M]
C2814	ECEA1EKS220B	22 25V	[M]
C2817	ECJ1VB1A105K	1 10V	[M]
C2818	ECJ1VB1A105K	1 10V	[M]
C2823	ECJ1VC1H101J	100P 50V	[M]
C2825	ECJ1VC1H101J	100P 50V	[M]
C2826	ECJ1VC1H101J	100P 50V	[M]
C2827	ECJ1VC1H101J	100P 50V	[M]
C2833	ECJ1VB1H104K	0.1 50V	[M]
C2834	ECEA1EKS220B	22 25V	[M]
C2835	ECEA1EKS220B	22 25V	[M]
C2837	ECJ1VB1C104K	0.1 16V	[M]
C2838	ECJ1VB1C104K	0.1 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2840	ECJ1VB1C104K	0.1 16V	[M]
C2841	ECEA1EKS220B	22 25V	[M]
C2842	ECEA0JKS101B	100 6.3V	[M]
C2900	F2A1V330A379	33 35V	[M]
C2901	ECA1EM102B	1000 25V	[M]
C2903	ECQB1H392KF3	3900P 50V	[M]
C2904	F2A1V330A379	33 35V	[M]
C2905	ERJ3GEY0R00V	0 1/16W	[M]
C2906	ECJ1VB1H103K	0.01 50V	[M]
C2908	ECEA1CKA101B	100 16V	[M]
C2910	ECJ1VB1H103K	0.01 50V	[M]
C2911	ECEA1CKS470B	47 16V	[M]
C2912	ECJ1VB1C104K	0.1 16V	[M]
C2913	ECEA1CKA101B	100 16V	[M]
C2914	ECEA1AKA330B	33 10V	[M]
C2915	ECJ1VB1H103K	0.01 50V	[M]
C2916	ECA0JAK221XB	220 6.3V	[M]
C2918	ECEA1CKS101B	100 16V	[M]
C2920	ECJ1VB1H102K	1000P 50V	[M]
C2921	ECJ1VB1C104K	0.1 16V	[M]
C2922	EEUFC0J821B	820P 6.3V	[M]
C2923	ECA1EM221B	220 25V	[M]
C2924	ECJ1VB1C104K	0.1 16V	[M]
C2925	ECA0JAK221XB	220 6.3V	[M]
C2926	ECJ1VB1C104K	0.1 16V	[M]
C2927	ECJ1VB1H103K	0.01 50V	[M]
C2929	ECJ1VB1H103K	0.01 50V	[M]
C2930	EEUFM1A681B	680P 10V	[M]
C2932	ECEA1CKA101B	100 16V	[M]
C2933	ECA0JM101B	100 6.3V	[M]
C2935	ECJ1VB1H103K	0.01 50V	[M]
C2936	ECA1CM221B	220 16V	[M]
C2937	ECJ1VB1H103K	0.01 50V	[M]
C2938	ECA1CM221B	220 16V	[M]
C2939	ECJ1VB1H103K	0.01 50V	[M]
C2940	ECJ1VB1H103K	0.01 50V	[M]
C2943	ECEA1HKS010B	1 50V	[M]
C2944	ECEA1HKS010B	1 50V	[M]
C2945	ECJ1VC1H100D	10P 50V	[M]
C2946	ECA0JM101B	100 6.3V	[M]
C2951	ECEA1CKS101B	100 16V	[M]
C2952	ECEA1CKS101B	100 16V	[M]
C2953	ECJ1VB1C104K	0.1 16V	[M]
C2955	ECA1EM221B	220 25V	[M]
C2960	ECJ1VB1C105K	1 16V	[M]
C2962	ECJ1VB1C104K	0.1 16V	[M]
C2963	ECEA1CKA101B	100 16V	[M]
C2970	ECJ1VB1C105K	1 16V	[M]
C2971	ERJ3GEY0R00V	0 1/16W	[M]
C2972	ERJ3GEY0R00V	0 1/16W	[M]
C2973	ERJ3GEY0R00V	0 1/16W	[M]
C2975	ECJ1VB1H104K	0.1 50V	[M]
C2976	ECA0JM101B	100 6.3V	[M]
C2977	ECJ1VB1C104K	0.1 16V	[M]
C3901	EEE0GA331WP	330P 4V	[M]
C3902	EEE0GA331WP	330P 4V	[M]
C3904	EEE0GA331WP	330P 4V	[M]
C3906	EEE0GA331WP	330P 4V	[M]
C3907	ECJ0EB1A104K	0.1 10V	[M]
C3908	ECJ0EB1A104K	0.1 10V	[M]
C3909	ECJ1VB0J105K	1 6.3V	[M]
C3910	ECJ0EB1A104K	0.1 10V	[M]
C3911	ECJ1VB0J105K	1 6.3V	[M]
C3913	ECJ0EB1A104K	0.1 10V	[M]
C3914	ECJ0EB1A104K	0.1 10V	[M]
C3915	ECJ1VB0J105K	1 6.3V	[M]
C3916	ECJ0EB1A104K	0.1 10V	[M]
C3917	ECJ1VB0J105K	1 6.3V	[M]
C3918	ECJ0EB1A104K	0.1 10V	[M]
C3919	ECJ1VB0J105K	1 6.3V	[M]
C3920	ECJ1VB0J105K	1 6.3V	[M]
C3921	ECJ0EB1A104K	0.1 10V	[M]
C3922	ECJ0EB1A104K	0.1 10V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C3923	ECJ1VB0J105K	1 6.3V	[M]
C3924	ECJ1VB0J105K	1 6.3V	[M]
C3925	ECJ0EB1A104K	0.1 10V	[M]
C3926	ECJ0EB1A104K	0.1 10V	[M]
C3927	ECJ1VB0J105K	1 6.3V	[M]
C3928	ECJ0EB1A104K	0.1 10V	[M]
C3929	ECJ0EB1A104K	0.1 10V	[M]
C3930	ECJ1VB0J105K	1 6.3V	[M]
C3932	ECJ1VB0J105K	1 6.3V	[M]
C3940	ECJ0EB1A104K	0.1 10V	[M]
C3941	ECJ0EC1H221J	220P 50V	[M]
C3954	ECJ0EF1C104Z	0.1 16V	[M]
C3955	ECJ0EB1C103K	0.01 16V	[M]
C3956	ECJ1VB0J105K	1 6.3V	[M]
C3964	ECJ0EB1A104K	0.1 10V	[M]
C5000	ECJ1VB1H102K	1000P 50V	[M]
C5001	ECJ1VB1H102K	1000P 50V	[M]
C5002	ECJ1VB1A474K	0.47 10V	[M]
C5003	ECJ1VB1A474K	0.47 10V	[M]
C5004	ECJ1VB1A474K	0.47 10V	[M]
C5005	ECJ1VB1A474K	0.47 10V	[M]
C5006	ECJ1VB1H331K	330P 50V	[M]
C5007	ECJ1VB1H331K	330P 50V	[M]
C5008	ECJ1VB1H153K	0.015 50V	[M]
C5009	ECJ1VB1H153K	0.015 50V	[M]
C5010	ECJ2VC2A221J	220P 100V	[M]
C5011	ECJ2VC2A221J	220P 100V	[M]
C5012	ECJ2VC2A221J	220P 100V	[M]
C5013	ECJ2VC2A221J	220P 100V	[M]
C5014	ECQV1H684JL3	0.68 50V	[M]
C5015	ECQV1H684JL3	0.68 50V	[M]
C5016	ECJ1VB1H104K	0.1 50V	[M]
C5017	ECJ1VB1H104K	0.1 50V	[M]
C5018	ECJ3YB2A104K	0.1 100V	[M]
C5019	ECJ1VB1H104K	0.1 50V	[M]
C5020	ECJ1VB1H104K	0.1 50V	[M]
C5021	ECJ1VB1H104K	0.1 50V	[M]
C5022	ECJ1VB1H104K	0.1 50V	[M]
C5023	ECJ3YB2A104K	0.1 100V	[M]
C5024	ECJ1VB1H104K	0.1 50V	[M]
C5025	ECJ1VB1H104K	0.1 50V	[M]
C5027	ECJ1VB1H104K	0.1 50V	[M]
C5028	ECJ1VB1H104K	0.1 50V	[M]
C5030	ECJ1VC1H221J	220P 50V	[M]
C5031	ECJ1VB1C224K	0.22 16V	[M]
C5032	ECJ1VB1H102K	1000P 50V	[M]
C5033	ECJ1VB1H104K	0.1 50V	[M]
C5040	F2A1J470A050	47 63V	[M]
C5050	ECJ1VB1H104K	0.1 50V	[M]
C5051	ECJ1VB1H104K	0.1 50V	[M]
C5052	ECJ1VB1H104K	0.1 50V	[M]
C5053	ECJ1VB1H104K	0.1 50V	[M]
C5106	ECJ1VB1A474K	0.47 10V	[M]
C5107	ECJ1VB1A474K	0.47 10V	[M]
C5117	ECJ1VB1H102K	1000P 50V	[M]
C5119	ECJ1VB1H102K	1000P 50V	[M]
C5120	ECJ1VB1A474K	0.47 10V	[M]
C5121	ECJ1VB1A474K	0.47 10V	[M]
C5133	ECA0JAK101XB	100 6.3V	[M]
C5150	ECJ1VB1H102K	1000P 50V	[M]
C5151	ECJ1VB1H102K	1000P 50V	[M]
C5152	ECJ1VB1H102K	1000P 50V	[M]
C5155	ECJ1VB1H102K	1000P 50V	[M]
C5200	ECJ1VB1H104K	0.1 50V	[M]
C5201	ECJ1VB1H153K	0.015 50V	[M]
C5202	ECJ1VB1C224K	0.22 16V	[M]
C5203	ECJ2VC2A221J	220P 100V	[M]
C5204	ECJ1VB1H153K	0.015 50V	[M]
C5205	ECJ2VC2A221J	220P 100V	[M]
C5206	ECJ1VB1H104K	0.1 50V	[M]
C5207	ECJ3YB2A104K	0.1 100V	[M]
C5208	ECJ1VB1H104K	0.1 50V	[M]
C5209	ECJ1VB1H104K	0.1 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C5211	ECJ2VC2A221J	220P 100V	[M]
C5212	ECJ1VC1H221J	220P 50V	[M]
C5213	ECJ1VB1H104K	0.1 50V	[M]
C5214	ECJ1VB1H104K	0.1 50V	[M]
C5216	ECJ1VB1H331K	330P 50V	[M]
C5217	ECJ1VB1H104K	0.1 50V	[M]
C5218	ECJ2VC2A221J	220P 100V	[M]
C5219	ECJ3YB2A104K	0.1 100V	[M]
C5220	ECJ1VB1H104K	0.1 50V	[M]
C5221	ECJ1VB1H102K	1000P 50V	[M]
C5222	ECJ1VB1A474K	0.47 10V	[M]
C5223	ECJ1VB1A474K	0.47 10V	[M]
C5224	ECJ1VB1H331K	330P 50V	[M]
C5225	ECQV1H684JL3	0.68 50V	[M]
C5226	ECJ1VB1H104K	0.1 50V	[M]
C5227	ECJ1VB1H104K	0.1 50V	[M]
C5228	ECQV1H684JL3	0.68 50V	[M]
C5231	ECJ1VB1H102K	1000P 50V	[M]
C5232	ECJ1VB1A474K	0.47 10V	[M]
C5233	ECJ1VB1A474K	0.47 10V	[M]
C5234	ECJ1VB1H102K	1000P 50V	[M]
C5240	F2A1J470A050	47 63V	[M]
C5250	ECJ1VB1H104K	0.1 50V	[M]
C5251	ECJ1VB1H104K	0.1 50V	[M]
C5300	ECQV1H684JL3	0.68 50V	[M]
C5301	ECJ1VB1H104K	0.1 50V	[M]
C5302	ECJ1VB1H104K	0.1 50V	[M]
C5303	ECJ1VB1H104K	0.1 50V	[M]
C5304	ECJ1VB1H331K	330P 50V	[M]
C5305	ECJ1VB1H104K	0.1 50V	[M]
C5306	ECJ1VB1H104K	0.1 50V	[M]
C5307	ECJ2VC2A221J	220P 100V	[M]
C5309	ECJ1VB1H104K	0.1 50V	[M]
C5310	ECJ3YB2A104K	0.1 100V	[M]
C5311	ECJ2VC2A221J	220P 100V	[M]
C5312	ECJ1VB1H331K	330P 50V	[M]
C5313	ECJ1VB1H104K	0.1 50V	[M]
C5314	ECJ1VB1A474K	0.47 10V	[M]
C5315	ECJ1VB1H102K	1000P 50V	[M]
C5316	ECJ1VB1H104K	0.1 50V	[M]
C5317	ECJ1VB1A474K	0.47 10V	[M]
C5318	ECJ1VB1H104K	0.1 50V	[M]
C5319	ECJ3YB2A104K	0.1 100V	[M]
C5321	ECJ1VB1C224K	0.22 16V	[M]
C5322	ECJ1VB1H153K	0.015 50V	[M]
C5323	ECJ1VC1H221J	220P 50V	[M]
C5324	ECJ1VB1H153K	0.015 50V	[M]
C5325	ECJ2VC2A221J	220P 100V	[M]
C5326	ECJ2VC2A221J	220P 100V	[M]
C5327	ECJ1VB1H104K	0.1 50V	[M]
C5328	ECQV1H684JL3	0.68 50V	[M]
C5331	ECJ1VB1H102K	1000P 50V	[M]
C5332	ECJ1VB1A474K	0.47 10V	[M]
C5333	ECJ1VB1H102K	1000P 50V	[M]
C5334	ECJ1VB1A474K	0.47 10V	[M]
C5350	ECJ1VB1H104K	0.1 50V	[M]
C5351	ECJ1VB1H104K	0.1 50V	[M]
C5400	ECQV1H684JL3	0.68 50V	[M]
C5401	ECJ1VB1H104K	0.1 50V	[M]
C5402	ECJ1VB1H104K	0.1 50V	[M]
C5403	ECJ1VB1H104K	0.1 50V	[M]
C5404	ECJ1VB1H331K	330P 50V	[M]
C5405	ECJ1VB1H104K	0.1 50V	[M]
C5406	ECJ1VB1H104K	0.1 50V	[M]
C5407	ECJ2VC2A221J	220P 100V	[M]
C5409	ECJ1VB1H104K	0.1 50V	[M]
C5410	ECJ3YB2A104K	0.1 100V	[M]
C5411	ECJ2VC2A221J	220P 100V	[M]
C5412	ECJ1VB1H331K	330P 50V	[M]
C5413	ECJ1VB1H104K	0.1 50V	[M]
C5416	ECJ1VB1H104K	0.1 50V	[M]
C5418	ECJ1VB1H104K	0.1 50V	[M]
C5419	ECJ3YB2A104K	0.1 100V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C5421	ECJ1VB1C224K	0.22 16V	[M]
C5422	ECJ1VB1H153K	0.015 50V	[M]
C5423	ECJ1VC1H221J	220P 50V	[M]
C5424	ECJ1VB1H153K	0.015 50V	[M]
C5425	ECJ2VC2A221J	220P 100V	[M]
C5426	ECJ2VC2A221J	220P 100V	[M]
C5427	ECJ1VB1H104K	0.1 50V	[M]
C5428	ECQV1H684JL3	0.68 50V	[M]
C5431	ECJ1VB1H102K	1000P 50V	[M]
C5440	F2A1J470A050	47 63V	[M]
C5445	ECJ1VB1H104K	0.1 50V	[M]
C5446	ECJ1VB1H104K	0.1 50V	[M]
C5447	ECJ1VB1H104K	0.1 50V	[M]
C5448	ECJ1VB1H104K	0.1 50V	[M]
C5449	ECJ1VB1H104K	0.1 50V	[M]
C5450	ECJ1VB1H104K	0.1 50V	[M]
C5508	F2A1V4710036	470 35V	[M]
C5509	F2A1V4710036	470 35V	[M]
C5510	F2A1V4710036	470 35V	[M]
C5511	F2A1V4710036	470 35V	[M]
C5512	F2A1V1020084	1000 35V	[M]
C5513	F2A1V1020084	1000 35V	[M]
C5514	ECJ1VB1H104K	0.1 50V	[M]
C5515	ECJ1VB1H104K	0.1 50V	[M]
C5516	F2A1V4710036	470 35V	[M]
C5517	F2A1V4710036	470 35V	[M]
C5518	ECJ1VB1H104K	0.1 50V	[M]
C5519	ECJ1VB1H104K	0.1 50V	[M]
C5520	ECJ1VB1H104K	0.1 50V	[M]
C5521	ECJ1VB1H104K	0.1 50V	[M]
C5522	ECJ1VB1H104K	0.1 50V	[M]
C5523	ECJ1VB1H104K	0.1 50V	[M]
C5524	ECJ1VB1H104K	0.1 50V	[M]
C5525	ECJ1VB1H104K	0.1 50V	[M]
C5540	F2A1J470A050	47 63V	[M]
C5550	ECJ1VB1H103K	0.01 50V	[M]
C5551	ECJ1VB1H391K	390P 50V	[M]
C5552	ECJ1VB1H391K	390P 50V	[M]
C5553	ECJ1VC1H101J	100P 50V	[M]
C5554	ECJ1VB1H104K	0.1 50V	[M]
C5555	ECJ3YB1C106K	10 16V	[M]
C5556	ECJ1VB1H103K	0.01 50V	[M]
C5557	ECJ1VC1H101J	100P 50V	[M]
C5558	ECJ1VC1H470J	47P 50V	[M]
C5559	ECJ1VC1H470J	47P 50V	[M]
C5560	ECJ1VB1H104K	0.1 50V	[M]
C5561	ECJ1VC1H101J	100P 50V	[M]
C5562	ECA0JM102B	1000 6.3V	[M]
C5601	ECA1CAK100XB	10 16V	[M]
C5602	ECA1CAK100XB	10 16V	[M]
C5690	ECJ1VB1H102K	1000P 50V	[M]
C5691	ECA1EAK100XB	10 25V	[M]
C5692	ECA0JAK221XB	220 6.3V	[M]
C5693	ECJ1VB1H104K	0.1 50V	[M]
C5694	ECA1CAK330XB	33 16V	[M]
C5695	ECJ1VB1H104K	0.1 50V	[M]
C5696	ECEA1EKS220B	22 25V	[M]
C5697	ECA1HAK010XB	1 50V	[M]
C5700	F1BAF1020020	1000P	[M] ⚠
C5701	ECQU2A334MLA	0.33	[M] ⚠
C5703	ECQU2A224MLC	0.22	[M] ⚠
C5704	F1BAF1020020	1000P	[M] ⚠
C5705	F1BAF1020020	1000P	[M] ⚠
C5712	F2B2D5610008	560 250V	[M]
C5713	ECQP6103JUB	0.01 630V	[M]
C5720	ECJ1VB1H104K	0.1 50V	[M]
C5721	ECJ1VB1H221K	220P 50V	[M]
C5722	ECJ1VB1H471K	470P 50V	[M]
C5724	F2A1H5600009	56 50V	[M]
C5727	ECQP6332JUB	3300 630V	[M]
C5728	ECJ1VB1H102K	1000P 50V	[M]
C5790	ECJ3YB2J222K	2200 630V	[M]
C5791	ECEA1HKA2R2B	2.2 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C5794	ECJ1VC1H220J	22P 50V	[M]
C5795	ECJ2VC1H102J	1000P 50V	[M]
C5796	ECJ2FB1H104K	0.1 50V	[M]
C5797	ECCN3A470KGE	47P 1000V	[M]
C5798	F2A1H5600009	56 50V	[M]
C5800	F1J2E1030004	0.01 250V	[M]
C5805	F2A1V122A776	1200 35V	[M]
C5806	F2A1V122A776	1200 35V	[M]
C5808	F2A1V122A776	1200 35V	[M]
C5809	F2A1V122A776	1200 35V	[M]
C5810	ECJ1VB1H104K	0.1 50V	[M]
C5812	ECJ1VB1H104K	0.1 50V	[M]
C5813	F2A1V102B074	1000 35V	[M]
C5815	ECJ1VB1H104K	0.1 50V	[M]
C5816	F2A1V4710036	470 35V	[M]
C5818	ECJ1VB1H104K	0.1 50V	[M]
C5819	F1J2E1030004	0.01 250V	[M]
C5820	F1J2E1030004	0.01 250V	[M]
C5821	F1J2E1030004	0.01 250V	[M]
C5822	F1J2E1030004	0.01 250V	[M]
C5823	ECJ1VB1H104K	0.1 50V	[M]
C5824	F2A1V4710036	470 35V	[M]
C5825	ECJ1VB1H104K	0.1 50V	[M]
C5826	F1J2E1030004	0.01 250V	[M]
C5831	ECJ1VB1H104K	0.1 50V	[M]
C5832	ECJ1VB1H104K	0.1 50V	[M]
C5896	ECJ1VB1H104K	0.1 50V	[M]
C5897	ECJ1VB1H104K	0.1 50V	[M]
C5898	ECJ1VB1H104K	0.1 50V	[M]
C5899	F2A1C221A104	220 16V	[M]
C6101	ECJ1VB1H473K	0.047 50V	[M]
C6102	ECJ1VB1A105K	1 10V	[M]
C6183	ECJ1VB1C105K	1 10V	[M]
C6184	ECJ2YB0J106M	10 6.3V	[M]
C6185	ECJ1VB1C105K	1 16V	[M]
C6186	ECJ1VB1C105K	1 16V	[M]
C6187	ECJ1VC1H150J	15P 50V	[M]
C6189	ECJ1VB1C105K	1 16V	[M]
C6201	ECJ1VB1H473K	0.047 50V	[M]
C6202	ECJ1VB1A105K	1 10V	[M]
C6283	ECJ1VB1H104K	0.1 50V	[M]
C6284	ECJ1VB1C105K	1 16V	[M]
C6288	ECJ1VC1H151K	150P 50V	[M]
C6301	ERJ3GEY0R00V	0 1/16W	[M]
C6801	ECJ1VB1H104K	0.1 50V	[M]
C6805	ECJ1VC1H101K	100P 50V	[M]
C6806	ECJ1VC1H101K	100P 50V	[M]
C6903	ECEA1HKA100B	10 50V	[M]
C6905	ECEA1HKA100B	10 50V	[M]
C6906	ECJ1VC1H101K	100P 50V	[M]
C6909	ECJ1VB1H103K	0.01 50V	[M]
C6910	ECEA0JKS101B	100 6.3V	[M]
C6911	ECJ1VB1H103K	0.01 50V	[M]
C6913	ECEA1HKS3R3B	3.3 50V	[M]
C6916	ECJ1VC1H101K	100P 50V	[M]
C6917	ECJ1VC1H101K	100P 50V	[M]
C6918	ECEA1AKA470B	47 10V	[M]
C6919	ECJ1VC1H101K	100P 50V	[M]
C6920	ECJ1VB1H333K	0.033 50V	[M]
C6921	ECJ1VB1H333K	0.033 50V	[M]
C6922	ECJ1VB1H103K	0.01 50V	[M]
C6923	ECJ1VB1H103K	0.01 50V	[M]
C6924	ECJ1VB1H103K	0.01 50V	[M]
C6925	ECJ1VB1H103K	0.01 50V	[M]
C6930	ERJ3GEY0R00V	0 1/16W	[M]
C6931	ECJ1VB1H103K	0.01 50V	[M]
C6932	ECJ1VB1H104K	0.1 50V	[M]
C6933	ECJ1VB1H104K	0.1 50V	[M]
C7001	ECJ1VB1H104K	0.1 50V	[M]
C7002	ECEA1CKS470B	47 16V	[M]
C7004			[M]
C8001	ECJ1VB1C104K	0.1 16V	[M]
C8001	EEE0GA331WP	330P 4V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C8003	ECJ0EF1C104Z	0.1 16V	[M]
C8004	ECJ0EF1C104Z	0.1 16V	[M]
C8005	ECJ0EF1C104Z	0.1 16V	[M]
C8006	ECJ0EF1C104Z	0.1 16V	[M]
C8007	ECJ0EF1C104Z	0.1 16V	[M]
C8007	F2G1C470A076	47 16V	[M]
C8008	F2G0J330A031	33 6.3V	[M]
C8009	ECJ1VB1H104K	0.1 50V	[M]
C8010	ECJ1VB1H104K	0.1 50V	[M]
C8011	F2G0J101A066	100 6.3V	[M]
C8011	F2G0J470A031	47 6.3V	[M]
C8012	ECJ0EF1C104Z	0.1 16V	[M]
C8012	F2G0J330A031	33 6.3V	[M]
C8013	ECJ0EF1C104Z	0.1 16V	[M]
C8014	ECJ0EF1C104Z	0.1 16V	[M]
C8015	ECJ0EF1C104Z	0.1 16V	[M]
C8016	ECJ0EF1C104Z	0.1 16V	[M]
C8018	ECJ0EF1C104Z	0.1 16V	[M]
C8020	ECJ0EF1C104Z	0.1 16V	[M]
C8021	ECJ0EF1C104Z	0.1 16V	[M]
C8022	ECJ0EF1C104Z	0.1 16V	[M]
C8023	ECJ0EF1C104Z	0.1 16V	[M]
C8026	ECJ0EF1C104Z	0.1 16V	[M]
C8051	ECJ1VB0J105K	1 6.3V	[M]
C8052	ECJ0EB1A104K	0.1 10V	[M]
C8053	ECJ0EF1C104Z	0.1 16V	[M]
C8054	ECJ0EC1H221J	220P 50V	[M]
C8055	ECJ1VB0J105K	1 6.3V	[M]
C8056	ECJ0EB1E222K	2200P 25V	[M]
C8057	ECJ1VB0J105K	1 6.3V	[M]
C8100	ECJ2FB0J106K	10 6.3V	[M]
C8101	ECJ2FB0J106K	10 6.3V	[M]
C8102	ECJ1VC1H101J	100P 50V	[M]
C8103	ECJ1VB1H681K	680P 50V	[M]
C8104	ECJ1VB0J105K	1 6.3V	[M]
C8111	ECJ0EB1A104K	0.1 10V	[M]
C8112	ECJ1VB0J105K	1 6.3V	[M]
C8113	ECJ0EB1E471K	470P 25V	[M]
C8151	ECJ1VB0J475K	4.7 6.3V	[M]
C8152	ECJ1VB1C105K	1 16V	[M]
C8200	ECJ2FB0J106K	10 6.3V	[M]
C8201	F2G0J101A066	100 6.3V	[M]
C8202	ECJ0EB1A104K	0.1 10V	[M]
C8202	ECJ1VC1H101J	100P 50V	[M]
C8203	ECJ0EB1A104K	0.1 10V	[M]
C8203	ECJ1VB1H681K	680P 50V	[M]
C8204	ECJ1VB0J105K	1 6.3V	[M]
C8211	ECJ0EB1E122K	1200P 25V	[M]
C8221	ECJ0EB1E102K	1000P 25V	[M]
C8222	ECJ0EB1E821K	820P 25V	[M]
C8225	ECJ0EB1E102K	1000P 25V	[M]
C8226	ECJ0EB1E102K	1000P 25V	[M]
C8231	ECJ0EB1A104K	0.1 10V	[M]
C8232	ECJ0EB1A104K	0.1 10V	[M]
C8251	F2G0J221A065	220 6.3V	[M]
C8252	ECJ0EF1C104Z	0.1 16V	[M]
C8253	ECJ0EF1C104Z	0.1 16V	[M]
C8255	F2G1C220A037	22 16V	[M]
C8256	ECJ0EF1C104Z	0.1 16V	[M]
C8257	F2G1C470A076	47 16V	[M]
C8258	ECJ0EF1C104Z	0.1 16V	[M]
C8261	ECJ0EF1C104Z	0.1 16V	[M]
C8262	ECJ0EF1C104Z	0.1 16V	[M]
C8265	F1J0J106A014	10 6.3V	[M]
C8301	F2G0J221A031	220 6.3V	[M]
C8302	F2G0J330A031	33 6.3V	[M]
C8303	ECJ0EB1A104K	0.1 10V	[M]
C8304	ECJ0EB1A104K	0.1 10V	[M]
C8305	ECJ0EB1A104K	0.1 10V	[M]
C8306	ECJ0EB1A104K	0.1 10V	[M]
C8311	ECJ0EB1A104K	0.1 10V	[M]
C8312	ECJ1VB0J105K	1 6.3V	[M]
C8313	ECJ1VB0J105K	1 6.3V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C8320	ECJ0EF1C104Z	0.1 16V	[M]
C8321	ECJ0EB1A104K	0.1 10V	[M]
C8325	ECJ0EB1A104K	0.1 10V	[M]
C8330	F2G0J470A031	47 6.3V	[M]
C8331	ECJ0EB1A104K	0.1 10V	[M]
C8335	ECJ0EB1A104K	0.1 10V	[M]
C8340	ECJ0EF1C104Z	0.1 16V	[M]
C8341	ECJ0EB1A104K	0.1 10V	[M]
C8401	ECJ0EC1H150J	15P 50V	[M]
C8421	F2G0J101A083	100 6.3V	[M]
C8422	ECJ0EF1C104Z	0.1 16V	[M]
C8423	F2G0J330A083	33 6.3V	[M]
C8424	ECJ0EF1C104Z	0.1 16V	[M]
C8426	ECJ0EF1C104Z	0.1 16V	[M]
C8427	ECJ0EF1C104Z	0.1 16V	[M]
C8428	ECJ0EF1C104Z	0.1 16V	[M]
C8429	ECJ0EF1C104Z	0.1 16V	[M]
C8430	ECJ0EF1C104Z	0.1 16V	[M]
C8501	F2G0J101A031	100 6.3V	[M]
C8502	ECJ0EF1C104Z	0.1 16V	[M]
C8503	ECJ0EF1C104Z	0.1 16V	[M]
C8504	ECJ0EF1C104Z	0.1 16V	[M]
C8505	ECJ0EF1C104Z	0.1 16V	[M]
C8506	ECJ0EF1C104Z	0.1 16V	[M]
C8511	ECJ1VB0J105K	1 6.3V	[M]
C8512	ECJ1VB0J105K	1 6.3V	[M]
C8513	ECJ0EB1A104K	0.1 10V	[M]
C8514	ECJ0EB1A104K	0.1 10V	[M]
C8515	ECJ0EB1A104K	0.1 10V	[M]
C8516	ECJ0EB1A104K	0.1 10V	[M]
C8521	ECJ0EB1A104K	0.1 10V	[M]
C8522	ECJ0EB1A104K	0.1 10V	[M]
C8523	ECJ0EF1C104Z	0.1 16V	[M]
C8524	ECJ0EF1C104Z	0.1 16V	[M]
C8525	ECJ0EB1C562K	5600P 16V	[M]
C8526	ECJ0EB1C183K	0.018 16V	[M]
C8527	ECJ0EB1A333K	0.033 10V	[M]
C8528	ECJ1VB0J105K	1 6.3V	[M]
C8529	ECJ1VB0J105K	1 6.3V	[M]
C8530	ECJ0EF1C104Z	0.1 16V	[M]
C8531	ECJ0EC1H101J	100P 50V	[M]
C8532	ECJ0EC1H221J	220P 50V	[M]
C8533	ECJ0EF1C104Z	0.1 16V	[M]
C8537	ECJ0EF1C104Z	0.1 16V	[M]
C8538	ECJ0EF1C104Z	0.1 16V	[M]
C8541	ECJ0EB1E472K	4700P 25V	[M]
C8550	F2G0J330A031	33 6.3V	[M]
C8551	ECJ0EF1C104Z	0.1 16V	[M]
C8552	F2G1C100A072	10 16V	[M]
C8553	F2G0J470A031	47 6.3V	[M]
C8554	ECJ1VB0J105K	1 6.3V	[M]
C8561	ECJ0EF1C104Z	0.1 16V	[M]
C8562	F2G1C100A072	10 16V	[M]
C8563	F2G0J470A031	47 6.3V	[M]
C8564	ECJ1VB0J105K	1 6.3V	[M]
C8571	ECJ3YB1A106M	10 10V	[M]
C8572	ECJ0EF1C104Z	0.1 16V	[M]
C8601	ECJ0EF1C104Z	0.1 16V	[M]
C8602	ECJ0EB1C153K	0.015 16V	[M]
C8606	ECJ0EF1C104Z	0.1 16V	[M]
C8611	ECJ0EF1C104Z	0.1 16V	[M]
C8621	ECJ0EC1H070D	7P 50V	[M]
C8622	ECJ0EC1H080D	8P 50V	[M]
C8651	ECJ0EF1C104Z	0.1 16V	[M]
C8652	ECJ0EF1C104Z	0.1 16V	[M]
C8691	ECJ0EF1C104Z	0.1 16V	[M]
C8695	ECJ0EF1C104Z	0.1 16V	[M]
C8701	ECJ0EB1A104K	0.1 10V	[M]
C8901	ECJ0EF1C104Z	0.1 16V	[M]
C9002	ECJ0EF1C104Z	0.1 16V	[M]
C9003	ECJ0EF1C104Z	0.1 16V	[M]
C9006	ECJ0EB1A104K	0.1 10V	[M]
C9007	ECJ0EF1C104Z	0.1 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C9017	ECJ0EB1A104K	0.1 10V	[M]